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THE MOTHER'S WORK

WITH

SICK CHILDREN.

BY

PROFESSOR J. B. FONSSAGRIVES.

Translated from the Fourth Paris Edition.

BY

F. P. FOSTER, M.D.

"VULGARISER SANS ABAISSER."

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TRANSLATOR'S PREFACE.

THIS translation of Professor FONSSAGRIVES' work (*Le Rôle des Mères dans les Maladies des Enfants*) owes its existence to the opinion that it would prove of value to many American mothers, while it was believed to be singularly free from the objectionable features which are to be found in most works of the sort, and which often prove subversive of that reciprocal feeling of trust between physician and patient, without which the former cannot perform his work satisfactorily.

I have endeavored to give the author's meaning in idiomatic English, rather than to adhere rigidly to his text. In a few instances I have, in view of the special wants of the American reader, omitted certain passages which did not seem to be essential to the work. I have added a glossary of such technical terms as it seemed convenient to retain. The

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few other additions which I have made will be found enclosed in brackets [ ], or in foot-notes signed with my initials.

I have altogether omitted the author's appendix of proverbs and epigrammatic quotations, principally from the impossibility of translating them satisfactorily.

FRANK P. FOSTER.

33 E. TWENTY-EIGHTH STREET,
NEW YORK, OCT. 28, 1872.

AUTHOR'S PREFACE.

THERE are two sorts of maternity—that of *blood*, and that involved in the *care of children*—the one being the complement of the other. Tenderness is the pivot of the former; intelligence, that of the latter.

Mothers exert a decisive influence upon the future health of their children, not merely by the hereditary qualities which they transmit to them, but also, and perhaps to an equal extent, by the physical education which they give them. Careful training may compensate for inherited defects; whereas the advantages of inherited health may be completely neutralized by an ill-conducted education.

Prejudicial as it is to the welfare of an infant to be subjected to the blundering, not to say the brutality, of empirical medication, replete with prejudices and false ideas, displaying the barbarism of ignorance; it is of equal importance that his mother should possess sound ideas in regard to the duty which she is to perform in case of his sickness, that she may be able to judge when the necessity arrives for seeking the prompt assistance of the physician, and that she be fortified with that nice and exact knowledge which should qualify her to second the physician's efforts.

These two ideas have given rise to this book; having

been constantly present in the author's mind while writing it.

Previous works of a like purpose have fallen upon one or the other, if not upon both, of these two stumbling blocks: either they have not been sufficiently clear, by reason of a too strictly technical language, or because too much has been attempted; or they have inspired in mothers a dangerous confidence, leading them to take the place of the physician. Fully impressed with these mistakes, the author has spared no pains to avoid them.

The sphere of the mother and that of the physician are, and must ever remain, perfectly distinct. The one instructs and aids the other; they are, or should be, common workers for the child's welfare. The physician prescribes, the mother executes—well or ill, accordingly as she has well understood, now the bearing of a circumstance, now the importance of a measure, always the value of time. Doubtless the physician's action is that of deciding, but it is cursory and transitory; the mother endows it with real efficiency by her own conduct, which is enduring, incessant, persevering. Which one of us, in his career as a physician, has not had a thousand occasions to notice the difference between the assistance offered him, on the one hand, by one of those mothers with narrow ideas, meddlesome prejudices, wearisome demands, and misapplied methods, and, on the other hand, by that other mother who, well understanding her part, is calm in demeanor, firmly reposing her confidence where she has once deliberately fixed it, and aiding the physician by her intelligent and devoted nursing? Whenever we meet a mother of this sort, whose child has recovered, we should freely share with her the merit of success; it often happens that her part has been equal to our own.

But devotion and intelligence are not sufficient; knowledge is necessary in addition, and in order to possess it, it is requisite to have acquired it. The art of nursing sick children is not to be improvised. Doubtless it may be attained by experience; but experience comes slowly, and the exigencies of the art are pressing, and will not be put off. Some guidance therefore is necessary, and the author has endeavored to furnish it to the mother in this book, which speaks to her of her dearest interest. A double task was before him: to free the ground, as much as he could, of the prejudices which encumbered it; and to replace them by sound and precise teachings. He has done his best to achieve it.

Above all else, this book is designed to uproot routine, and to this end the coöperation of the intelligent and educated mother, for whom it is intended, is invoked. Her spirit of beneficence leads her to the bedside of sick children weighed down by misery and ignorance. She must add the alms of her intelligence to that of her purse; good counsel is worth as much as bread; in this war against ignorance, she has a true apostolate to fulfil, of which her goodness of heart makes the mere mention sufficient.

Certainly, she will not reproach the author with having belittled the scope of her action by discountenancing her meddling with medicine: to be of value, a contribution should be fitting; her mission is not in medication: it is in the faithful carrying out of the measures of which she is the minister, at once so effective and so sublime. And let her not think that this partition of labor is the work of a profession jealous of its privileges, shutting itself up in its temple, and sedulously barring the gates. No; medicine is defending her interests, not its own; it knows the frail tenure of life, the deadly

influence of prejudices and of routine, the aggressive effrontery of incompetence, the dangers of negligence, and seeks to avert them; it is more than its right, it is its duty.

The author has been forced to speak to mothers in this language of sentiment and reason, which addresses at once their heart and their intelligence. It was his wish to enlist both alike. He does not seek success; should he meet with it, he will be especially pleased with the more general diffusion of the ideas contained in this book. At all events, it is hoped that the double character of a serious attempt, and one proceeding from conviction, will not be denied it.

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THE

MOTHER'S WORK WITH SICK CHILDREN.

CHAPTER I.

THE VALUE OF HEALTH, AND THE CARE OF CHILDREN.

"Only a healthy youth can assure a comfortable old age."

PLUTARCH.

"She layeth her hands to the spindle." * * *

PROVERBS xxxi. 19.

HEALTH is the chief of all blessings, it is constantly and enthusiastically reiterated. It would seem, then, that all pains should be taken to acquire it, and every care to maintain it, and yet there is scarcely anything which really receives so little attention;—when we possess it, we risk it in a thousand hazards; when it is no longer ours, we do nothing calculated to recover it. Health is accorded only a purely Platonic devotion, a false cultus, to which neither a habit, a desire, a prejudice, nor a penny would often be sacrificed. The explanation of this is, that health is an abstract advantage, which we do not perceive while we possess it, and which asserts itself only by its absence and by the contrast of suffering. It is fondly imagined to constitute a fund which can be drawn upon indefinitely, without ever becoming exhausted; we call up the memory of past impunity, count

on exceptions, and, as in many other matters, profit nothing by the experience of others.

All sorts of inconsistency gather upon this ground; but they are not frankly acknowledged, and physicians, in pointing them out, are accused of attempting to further their own interests.

And yet, how many good reasons there are for appreciating the value of health, in comparison with which all other blessings, fortune, honors, pleasures, are but negative, if not cruelly deceptive, advantages! We are told in Ecclesiasticus, that "Better is the poor, being sound and strong of constitution, than a rich man that is afflicted in his body" (xxx. 14); and that "There is no riches above a sound body, and no joy above the joy of the heart" (xxx. 16). The mind accepts and maintains these abstract propositions; but yet we launch ourselves into the pursuit of fortune with an ardor equal to the indifference with which we treat the preservation of health. This inconsistency has long been manifested, and there appears no sign of its coming to an end. I have already examined into its causes,* and need not recur to the subject *in extenso;* I intend to consider it here only as it concerns the health of children.

It is at once the foundation pillar of domestic happiness, the condition of all fruitful education and instruction, and the guarantee of the future vigor and happiness of children.

Sad is that hearthstone at which disease is an habitual visitor; cheerfulness is crowded out by it, and an air of melancholy pervades the whole house. There are murmurs, silence, and sorrowful looks, instead of merriment; bottles of medicine instead of playthings; a sombre alcove instead of a lawn; * * * * what mother does not

* *Santé et Hygiène*, octavo, Montpellier, 1864.

recognize this picture, and has not tasted the bitterness of those sad days, which often, it is true, end in convalescence, but sometimes also in grief?

Moreover, the emotions excited by acute diseases too often give place only to the prolonged gloom of chronic illness; if there is less immediate danger to life, yet the future is uncertain or threatening; the sufferings and privations which have been bravely endured will perhaps prove in vain, and the reward of sacrifice and anxiety be lost.

And then, if life indeed be saved, perhaps strength will have gone forever; thereafter, instead of a patient, a valetudinarian is to be cared for, unfitted for the struggles of life, and whose strength will become expended in his mere maintenance. The child makes the sunshine and storm of domestic happiness, to warm and illumine the mother's heart or to weigh it down in sorrow. Its health is the pivot of these changes, controlling the whole aspect of the household. Family mirth has to yield to its moods.

Mothers, I need not strive to convince you of all this; every day teaches it to your hearts better than I could ever do; but you will allow me to summon your mind to the aid of your heart, and to demand that you work courageously and without ceasing, to give to your children that vigorous health which is equally important to their happiness and to your own.

To their happiness, I say, for health is the foundation of all education, that is to say, of all discipline of the will, of the affections, and of the intelligence. Doubtless it would be possible to endow a defective body with the virtues of a manly spirit; but how often is education held in check by ill health! Everything is in disorder: a course of action is marked out to-day, to be abandoned to morrow; whims have to be respected; everything

must yield to the imperative demands of feebleness and suffering; there is caprice without end, disobedience, self-will, and rebellion, which count on impunity. In a word, a child is spoiled on account of that very commendable, but very unfortunate, feeling—the fear of doing him an injury which shall cost his life.

There can be no discipline with a child habitually ailing, no real culture of the mind, no instruction. Either his duty is not done at all, or it is badly done. The slightest effort at work drives the color from his face and draws a dark circle around his eyes. An accession of fever, an unwonted pallor, an attack of cough, lead to restlessness, and keep him from his class. The child, observing these forced interruptions, takes a liking to them, since they free him from the necessity of emulation, and foster his innate laziness. Months and years follow each other, and the period of adolescence arrives, loaded with an accumulation of work which it is now too late to accomplish. Hence a spoiled career, an unstable mental constitution, and all the material and moral consequences which flow therefrom. An imperious law has joined happiness to duty and work. What wonder, then, that sickly children, possessing at once less moral energy and less intellectual culture than others, often vegetate in after life in the sad consciousness of their incompetency and uselessness?

But a danger threatens them also; that, namely, of never emerging from the sickliness of their childhood. The first years are decisive as to future health, and we cannot too often ponder the Spanish proverb, which expresses a sad and unvarying truth: "What enters with the swaddling comes out only with the shroud." If, as Joseph de Maistre said, mothers form the moral man on their knees, they form the physical man also, and not one

of their methods, either in health or in sickness, fails to affect their future vigor. An English poet, Wordsworth, has said that *the Child is father of the Man*, and a profound meaning lies hidden beneath the odd appearance of this saying. The man indeed inherits from the child, and mothers have a great influence upon the value of this heritage. The whole of maternity is comprised in these four words—blood, food, care, devotion; and what ministry is at the same time more august, more complex, and more exalted?

Such is the mother's mission in that grand work which is to give to the future family a father possessed of a sound body and a correct mind and heart, and to the State a *man* in the broad and beautiful meaning of the word. If they fulfill this well they can, without envy, leave to us the harassing affairs of public life and the higher intellectual pursuits. * * * * To them has been given the better part.

I have elsewhere* treated of the mother's part in the physical education of children, and I have endeavored to show that if she acts powerfully upon them by means of *heredity*—that is to say, through her blood flowing in their veins, she acts none the less powerfully by her *conduct* in regard to them; she can, if she goes about it in the right way, mitigate the bad, improve the commonplace, and perfect the good. That people which includes the greatest number of devoted and intelligent mothers will always be the strongest upon the battle-field of action, as well as upon that of thought. They confer honor and strength upon the State, as well as upon the family, that seminary of the republic—*seminarium reipublicæ*—as Cicero so aptly named it.

But her care cannot prevail against innate weakness,

* *Entretiens familiers sur l'hygiène*, 2d ed., Paris, 1869.

or the accidental loss of health; the child is sick, and needs another sort of care. He will find it if, during health, he has received from his mother that firm and intelligent direction, that comprehension of his real interests, that enlightened solicitude without which there is no fruitful training. Everything plays a part in this matter, since the means of prevention and those of treatment depend upon the same qualities of heart and mind. With them, all is security; without them, all is peril. If the mother has correctly estimated the value of health preserved, she will correctly appreciate that of health restored, and she will aid the physician by an earnest, discreet, and intelligent co-operation. In treatises on the diseases of children the chances of the favorable or unfavorable termination of the different maladies are calculated, allowing due weight to all the elements of *prognosis*, as they say in the schools: constitution, temperament, external influences, nothing is forgotten that can furnish an omen; but the moral and material value of *maternal care* is scarcely thought of, and yet its importance is great, and well deserves recognition. Intelligence and education are defensive weapons; a sick child's bed is well guarded with these around it; they ward off the perils of routine, the narrow ideas of prejudice, the meddling of incompetence and recklessness, and all goes well, because everything is done properly and at the proper time. It is generally believed that the physician alone incurs the responsibility of treatment. This is a grievous error; the mother bears a considerable part; she contributes to failure as well as to success, and when, after *good care*, her child has recovered, she may legitimately reflect that she has contributed to the result, and it should be said that, "*Having borne the pain, it is but just that she should have the honor.*"

Let us inquire now what she has to learn at first, and to practise subsequently, in order to fulfill properly the rôle of *nurse*, which in name is so lowly, so vulgar in its details, but which ennobles the woman, be she work-woman or duchess, who understands how to enact it, and who puts her whole heart and mind into it; whatever, that is to say, inspires devotion and renders it effective. There is nothing lowering in it; it is an added glory to those of a maternity rightly understood.

CHAPTER II

THE MOTHER AND THE PHYSICIAN

"Qu'un ami véritable est une douce chose!"

LA FONTAINE.

"Rien n'embarrasse nos fonctions davantage."

THE first exercise of maternal solicitude is in the choice of a physician. The matter is as delicate as it is difficult; but it is commonly freed from all this by the inconceivable frivolity with which it is treated. "*Incompetence observes and chance decides.*" In some cases less care is given to it than to the choice of a purveyor of fashions. People take the first physician whom they may happen to think of:—the fashionable doctor, their friends' doctor; one whom they have never seen, or one whose personal appearance pleases them, and thus, without more ado, the most serious possible contract is concluded.

This abdication of the judgment is deplorable. An unsatisfactory physician is not as easily got rid of as an unwelcome visitor; artifice is rendered necessary by his position, by his assiduous services, his good intentions, the good he has done; all of which considerations are very stringent with persons possessed of delicacy. A temporizing course is pursued. You have a physician, but your confidence is in another. You seek clandestine

advice here and there, now from a worthless system of medicine, now from a fraternity which is either faithless or pushed to its last ditch. You carry out the prescriptions timidly, or only in part; sometimes not at all. The child thus harassed does not get along; the doctor does not understand the matter, and things go on from bad to worse. Thus you continue for a longer or shorter time, between artifice and peril, and, if the physician have not sufficient penetration to perceive that the confidence due him has been encroached upon, and does not, with praiseworthy resolution, put an end to the awkward situation, this state of things, in every way deplorable, has no definite limit.

In former times there was such a person as the *family physician;* he exists no longer, except in the few small towns where old-time customs are still kept up, and in which, free thus far from the cosmopolitan mania, the various generations of a family quietly succeed each other under the same roof, and live and die amid the same surroundings. Under such circumstances, we still find physicians who, after forty years of practice, can count on handing down to their sons who succeed them both the confidence of families and what experience has taught them of their constitutions. Such a state of things aids the practitioner and gives greater security to his families. This reciprocity, of confidence on the one side and of devotion on the other, lasts through a whole lifetime. The physician performs the first services for the child; he follows him amid the many vicissitudes of his earlier years, directs his adolescence (often a wild one), gives counsel as to his choice of a vocation, and, recognizing the peculiar qualities which he has inherited, and which would otherwise elude observation, his medical treatment of his ailments is successful and creditable.

But how vastly different is the ordinary course of things! This placid home-life is becoming the exception; the house is giving place to the tent; we are born in one town, reared in another, married in a third, and we shall die, God knows where. Thus situated—encamped, as it were—we do not dream of providing ourselves with a physician. There comes an emergency, and we go from door to door in quest of the first one we may meet. He may know nothing about either the child or the family, but that fact does not prevent him, to meet the urgency of the case, from giving a snap judgment of the disease in ten minutes and producing a prescription. Whatever may be the ability of the practitioner, thus called in at hap-hazard, his treatment can scarcely be more than indifferent.

I cannot too strongly urge young mothers to employ for their children, whenever possible, the physician who has attended themselves, and who preserves among his notes, or at least in his memory, their family health record. Such a one may be *old-fashioned*, inferior in brilliant qualities, or less enterprising; but if, nevertheless, he is devoted and well-educated, he should on no account be superseded. It is dangerous to lose sight of the fact that the practice of medicine is an affair of the heart as well as of the understanding.

The choice of a physician is certainly a delicate matter, and calls for rare discernment. It is all the more difficult from the fact that medicine, of all arts, is the only one which must always be subject to the judgment of incompetent persons. With a little taste, judgment, and instruction, you may reason well enough upon matters and things in general—music, literature, or poetry; but, with a good deal of taste, judgment, and instruction, you may reason very badly in regard to medicine. It behooves one, then, to be well advised.

If a medical friend, whose years have led him to retire from practice, recommends a physician, you should make haste to profit by such good fortune; in default thereof, take counsel with those careful mothers who give their whole mind to their children; a physician's scientific standing may doubtless escape them (only physicians can judge of each other in this respect), but they certainly will not be deceived in regard to his patient services, his attentive observation, his devoted sympathy, and his ardent desire to do things correctly. If to these qualities be added cleverness (and we may well envy women their capacity to judge in this respect), there is no need to seek further.

The medical treatment of children is of a truly special character, and the inhabitants of large cities do well to select for this purpose physicians who have given particular attention to the diseases of early life. The physiology and the habits of children possess characters peculiarly their own, which, for their nice interpretation, demand a particular sort of training. To be able to catch and analyze the facial expression in children, to recognize their imperfectly expressed wants, to understand how they are affected by medicines, to have a precise knowledge of hygiene as applied to them—all this is not to be improvised, but presupposes a practical experience, which is acquired the more rapidly the more one has to do with the care of children.

Therefore, other things being equal, it is best to choose a physician who, having children of his own, lives in close contact with them, has learned to know them, knows how to talk to them at once with authority and gentleness, and to show a tender sympathy, so much needed by the little ones, in the performance of his duties towards them, and who knows the secrets of control over them.

I will not burden either my readers or myself by sketching the portrait of the typical physician. Molière made up his Sganarelle by taking the nose of one, the eye of another, the foot of another, and the voice of still another. His type will be enduring, because it exists in nature, although in fragments, scattered here and there. So with the perfect physician, who is the quintessence of qualities belonging to very diverse individuals. Perfection in this form is as rare as in any other ; I have never met with it, either in myself or in any one else, and I should advise but moderate expectations in this respect. Only the perfect mother can expect to find a perfect physician, one of unerring judgment, a resolute and prudent spirit, possessing originality with judicial habits of thought, firmness with gentleness, a correct conscience and intelligent apprehension, etc., etc. You may go a good distance in this programme, but it is well to be content with less.

Quesnay, the economist, who was also a physician, says somewhere: "Why don't persons of pure and impregnable virtue have a square-cut nose? It would be very convenient for governments, and things would go on capitally." It is also very much to be regretted that good doctors cannot be distinguished by some such palpable mark ; it would be very convenient for mothers, and things would go on capitally with their children's health. But, since that is impossible, let them exercise prudence in their choice ; let their trust rest upon reason (although it must be confessed that trust does not reason, when it is a question of doctors), and let them maintain it when once bestowed. Let them, in short, reflect upon the intimate bonds which are to bind them to the physician who is to have charge of their children's health. They will be found together at the bedside, enduring the same

anxieties, sharing the same hopes, striving for the same ends—the one in her capacity as nurse; the other with his judgment and knowledge. Let the mother beware of cooling a zeal of which she has need, a devotion of which an unlucky day will teach her the worth. A strange physician will not suffice her then, she will want one who is a friend also. If she has found him, let her, as a matter of prudence, hold fast to him.

It is not enough to have chosen a good physician, one who repays in cleverness and zeal what is accorded him of affection and trust; you must know how to make use of him. A physician, strong in his own convictions, and earnest in his work (and, very fortunately, there are many such), is a delicate creature to manage. He is easily exalted or cast down. A word of unmerited distrust draws him down from enthusiastic duty to *mere* duty; a word of trust and attachment increases his zeal tenfold. *Your doctor's care of you depends on yourself*, be it remembered, and the best way (I will even say the only way,) of getting yourself well taken care of, is by giving yourself up unreservedly to the one you have chosen, leaving to him the whole responsibility, without hindering his action by any ill-timed and meddlesome interference.

An affectionate indulgence must be shown him; he meets with so many dreary experiences in his career, that he really has some rights of which he has reason to feel tenacious.

Physicians are accused of being *thin skinned*, and, in a general way, that is true enough. But in whom was it ever more excusable? The sensitiveness of mere self-love is puerile, and not worth talking about; but that which is rooted at the same time in scientific conviction, in a sense of responsibility, and in conscientious anxiety, is worthy of consideration, and needs careful management.

A physician who is not *sensitive* is apt to be *indifferent*, and the mediocrity of his services offsets his easy-going ways.

On the other hand, we should not confound a certain ruggedness of language, or a shocking brusqueness of manner, with a lack of feeling; they oftener denote solicitude than harshness, and they almost always cover a good heart. I knew an old doctor whose rudeness was, to a certain extent, proverbial, but who never could sleep when his mind was exercised in regard to a patient. He would become taciturn, would scarcely touch food, and the sound of his footsteps pacing his room during the entire night was, for his family, a sure indication of his anxiety. An attack of apoplexy finally carried him off, after a martyrdom of thirty years. Let it not be supposed that this is a solitary instance.

There is the secret of those requirements which are so often set down to our discredit. We may have health, reputation and fortune, and gather about our hearth all the elements of happiness, and yet never taste it, because, outside of all these, almost daily, we encounter annoyances which poison all, and make of life a veritable punishment. And we are envied the enjoyment of leading a peaceful life, and the serenity of spirits which nothing agitates! The *gruff benefactor* is a privileged character, and medicine claims the same consideration. I have just said that nothing is so dangerous and unreasonable as to wait for an attack of illness before choosing a physician, as is too often done. A fine time for making a judicious selection, and for introducing an utter stranger into the sanctuary of one's dearest ties! There is another mistake, which I must point out to mothers (without, however, slighting the fathers, they may well believe)—that, namely, of looking upon the physician, once chosen, as

having no part or function in the family, except when illness calls him there. It is a very narrow and a very dangerous conception of his rôle, and one which simply ignores one-half of practical medicine, *i. e.*, hygiene. It is said that the Chinese pay their physicians with a liberality proportioned to their freedom from sickness during the year. I do not advise that we should imitate the Chinese, but this stimulus to hygienic care certainly smacks of the judicious. We make our appearance in families only to take charge of patients, many grave questions being resolved without our participation. Children often receive a guidance the reverse of what is proper, and we are called upon to fulfil the ungrateful office of repairing the damages we might generally have prevented. *It is better to care for a man's health than for his disease.*

I would that the relations of physicians with their families were established on such a footing that the former should make visits as often as they should judge necessary for the prevention of disease. This would be a very precious protective measure for children. To select a good physician, to put the health of the whole household into his keeping, to expect of him ordinarily, besides unforeseen calls, a visit at certain intervals, once a month, for instance, how comforting would it be for the maternal conscience! How it would increase the chances of security! Intelligent families do indeed understand the value to themselves of the intimate relations which they succeed in establishing with their physician, who sees them frequently, follows them in their various vicissitudes, knows them, and affords them in time of trouble a scientific aid, redoubled by an affectionate sympathy.

One specially important thing is, not to abuse a physician and cool his zeal by trivial calls, thus running the

risk of his indifference at a time when his services shall have become really necessary. Young mothers easily fall into this error, against which their husband's steadier and less excitable judgment should put them on their guard. Some slight indisposition shows itself; anxiety is kindled, messengers are immediately despatched, often in several directions at once; the representations which are made to the physician, often of the darkest hue, warrant no delay; he flies, leaving his patients, who have urgent need of him, deranges the set order of his visits, loses his time, and, on his arrival, finds the child asleep, and the mother at a loss to justify her alarm. Her story, however dramatically put, is in marked contrast with the reality. The physician smilingly reassures her, but he stows away in a corner of his memory that little piece of innocent mystification. On a second call he will come less hastily; on a third less quickly yet; on a fourth he will take his own time; and at last there will come a time when he will really arrive too late, and the fault will not really be his.

Physicians know fussy mothers, and dread them almost as much as they do indifferent ones. One was once called, in the middle of a cold, rainy night: *The child was dying, the child was dead!* He had simply been agitated, which had been magnified into convulsions. His cheeks were fresh and rosy, his pulse natural, but he was tossing about in his cradle in a significant manner. It was not *in Cisalpine Gaul*, but there was no chance of being deceived; it was a case of that same *Kangourisme* so well described by the ingenious Töpffer, and which is seen in cradles as well as in hospital beds. The hypothesis was formed, and it received an irrefragable demonstration on the spot. The lesson was severe, but I should not dare to say that it was effectual.

A physician's sleep is something to be respected; in case of need there should be no hesitation in disturbing it, but one should think twice. "It is his trade" is a harsh saying, never found on the lips of a mother sufficiently devoted herself to comprehend the value of devotion in others. Not only are these imperious and needless calls unseemly, but they are also dangerous, since zeal, if put to useless tests, is finally extinguished, and there is danger of the mischance which fell to the lot of the fabled shepherd, who amused himself with crying "Wolf!"

Avoid also, as much as possible, the appearance of unjust distrust; anxiety quickly gives rise to this feeling, and the physician, sometimes immoderately praised for a success to which he has only paved the way, still oftener gets blamed for unfavorable results of which he is innocent. If a physician has been well chosen, his conscience will be on the watch, and he will always be ready to share a burden when it has become too weighty. This matter should be left to himself.

A word upon the delicate question of consultations. Some are truly profitable, some are useless, and there are some which aggravate the situation to no purpose. The usefulness of a consultation is very often, and without our art being responsible therefor, in inverse proportion to the number of physicians who take part in it. Could it be otherwise in a case involving an encounter of impressions, ideas, remembrances, and experience of a largely personal character, the averaging of shades of difference, the enforced reconciliation of diverse methods of practice? It is the part of wisdom to choose a consultant advisedly, or rather to leave the choice to the physician in attendance, and to hold to the choice; and yet it is of importance, in order that the child may be well treated, that the direction of the treatment, when once discussed and decided

upon, should remain in the hands of one alone. To scatter the responsibility and complicate the proceedings is a bad system. The attending physician has had the benefit of advice, he has profited by it; he can count only on himself, and does everything upon his own honor. No one dreams of trusting a ship to two captains, and I have not read that empires have ever prospered under several masters. Unity in direction and security in action are correlative facts. I am sure that there is no experienced physician who does not share my feeling. To be profitable to the patient, a consultation should be, and should remain, a *counselling*. If it comes from jealousy, it freezes the physician; if it has the character of an allotment of functions, it fetters him; and this with the best, the most disinterested and the purest intentions. For this, mothers may trust an experience already prolonged.

It appears, then, that there are between the mother and the physician delicate relations, which should be founded on a mutual confidence and sacrifice, and which are repugnant to appeal on slight occasion or to precipitate change. She should choose well, and, the choice once made, let her entirely yield up her children's health to his faithfulness, his wisdom, his prudence, and his affection. *Confiding mothers make devoted physicians.* Medicine, in short, is a matter of intimacy, and the affection which it meets with, or which it shows, doubles its efforts, and to a certain extent increases its powers. Where it deals only in its intelligence (which is what happens in cases of chance relations), it keeps back its better part, it does only its bare duty, and the child is only half taken care of.

CHAPTER III.

CHARLATANISM AND GOSSIP.

"Le vulgaire veut être trompé * * * qu'il soit détrompé." * *

"Modest ignorance is salutary science."

ENGLISH PROVERB.

THERE is a hydra which cruelly threatens the public health; she flaunts her thousand heads in broad daylight, and no one dreams of lopping them off. I refer to charlatanism. Her Lernean swamp stretches out its fens everywhere: at the street corners, on the fourth page of the newspapers, upon the wrappers of secret remedies and specifics. She is the daughter of love of money and human credulity; and she grows rank—principally at the expense of her mother, whom yet, it must be confessed, she will never drain. Charlatanism constitutes more than two-thirds of medicine—and such medicine! It flourishes on the diseases which we fail to cure, on those which we do not cure rapidly enough, on the repulsiveness of the measures which we commonly make use of, and, even in case of failure, it meets with a reward which would generally be summarily refused to us. Physicians despise it, patients encourage it, and the law refuses to interfere with it; what wonder, then, that it flourishes more and more? *Brains awry*, as the old poet Malherbe called them, are, unfortunately, common; charlatanism

knows it and counts on them; it may count also upon those which, ordinarily correct, have become *awry* as regards health; and where is the patient (I appeal to physicians who are also patients) who preserves his soundness of judgment and freedom of will intact?

I conjure those mothers who care for their duty to fortify themselves against the snares of charlatanism: they will find them everywhere, promising in a thousand ways a rapid cure at small cost, an easy cure, without any privations or anything disagreeable; that is to say, a thorough *decoy*. Let them beware of it: their children's health, the dignity of their own reason, and the peace of their own conscience are alike at stake. Would they, ignorant of financial matters, but relying on the dazzling promises of some empiric of the money market, risk their children's fortunes in rash speculations? Unquestionably, *no*; they would confide its management to competent persons, who would promise less and accomplish more. Is health, then, less precious and more easily taken care of than *money*? The weight of responsibility resting upon *mothers* is already great. Foolish indeed, if not really culpable, are those who add to it by dealing with their children's health otherwise than by those humble, but so useful, measures which are strictly within their ability.

Charlatans, as they very well know, have an eye to their purse, and care little whether or not their children recover. Their attacks are aimed at two vulnerable points—fear and ignorance.

They paint the picture dark, employing with diabolical art the emotional power of a hint, proclaiming an alarm that they may gather in large fees, vexing the spirit with the data of a crude physiology, entrenching themselves in the impregnable citadel of wind, humors, and worms—that morbid trilogy in which routine impris-

ons the minds of mothers, and of which we shall have to speak presently.

They should oppose knowledge to speculation, and turn daylight on these unsound ideas, being well assured that their solicitude can find its proper safeguard only in a rational, capable and responsible medical practice. It is constantly repeated: "The vulgar are fond of being deceived; let them be deceived;" but, for my part, I say, "Let them be undeceived," and I hate charlatanism as much on account of the humiliation which its successes inflict upon human reason, as for the positive evil which it produces. O sweet Revalescière! You cured the Marshal of Pluskow Court of his gastritis more easily than men will ever be cured of their sad passion for the pit-falls of charlatanism and the gross allurements of the advertiser.

Charlatanism, stripped of authority, does comparatively little harm; it is treated with the contempt which it deserves, and only those who allow themselves to be deceived by it bear the consequences of their irremediable credulity. If their sanitary welfare is compromised, the interests of science yet remain safe. But, alas! besides this gross charlatanism, there is another, happily rare, which is more subtle and more dangerous: it is professional charlatanism. It is the hideous plague of art. It mounts upon a trestlework of sonorous phrases and high-sounding promises, claims impossible achievements, and, besides the traditional remedies and acknowledged formulæ, it boasts new remedies and secret formulæ; it proffers its bait to exhausted patience, to those suffering under long-continued diseases; it carries itself as an innovator, like Clitandre in *l'amour médecin;* and, when another Sganarelle asks it if it has no new aperient, it answers: "Sir, my remedies are different from other men's.

They have the emetic, leeches, purgatives, and lavements; but I cure by words, by sounds, by letters, by talismans, and by rings made under planetary influence." And the public cries out, with Sganarelle: "What a great man!"

Etymologists derive the word *charlatanism* from the Italian verb *ciarlare* (to talk a great deal); medical gossip resembles charlatanism in this respect, but it differs from it at least in the disinterestedness of its intentions. It does as much harm, if not more, for its name is *legion*. It holds forth everywhere; in the street, upon a threshold, in a back shop, in tumble-down houses and in hotels, in garrets and in saloons, and it uses the lips of the artisan and the janitress as well as of the man of the world and the duchess. Bossuet, speaking of the confused dissolution of all things in the pagan world, has uttered a remark upon this subject, which I may quote in connection with my humbler and narrower ideas. "In company, everybody is a physician, except the doctor himself." Strange to say, this interchange of functions increases with the spread of general intelligence, and, as I look back twenty years, I do not find that, in this respect, the human race has progressed a line in the path of good sense. There are men who pass their lives bowed down with work which is doubtless attractive, but which uses up their strength, makes them old before their time, and (statistics demonstrate it) shortens their allotted term of life; given over to this exacting labor, they come in contact with all the pleasures of life, with scarcely the time to enjoy them; they live in the midst of miseries which freeze their imagination, and sadden their heart and their senses; they employ in the application of their art the time which is left them from a continual, fatiguing, sometimes perilous study; and these men, representing, it must be confessed, a quite ordinary grade of intelligence,

would never arrive at anything better than the common empiricism which arrives at conclusions without premises, whose mental operations, extremely simple, are limited to the administration of formulæ which proceed they know not whence, thus justifying, for once, Voltaire's ill-natured assertion, that they throw "drugs of which they know nothing into an organism of which they know less."

I am not desirous of exploring here the philosophical causes of this sad fact; I am content with establishing its reality, and with the innocent remark that these two verses, addressed to the charlatan, may also be applied to the empiric:

Le Charlatan prend rarement,
Les grands remèdes qu'il étale.

And what remedies does the empiric not vaunt? An arsenal of old formulæ raked from the dust of libraries; elixirs, orvietans, pomades, pills, etc.—all contained in the impure formulary of a system of medicine which has now happily disappeared. I have often thought that it would be an interesting work to trace back the scientific origin of popular drugs and formulæ. I hand it over to the attention of the learned, and return to my topic, to conclude it with this anecdote of the Duke of Ferrara, which, though trite, is, and will always remain, true. It possesses a peculiar flavor on account of the quaint and glowing language of Laurent Joubert, a physician of the sixteenth century, from whom I borrow it:

"It is said that the Duke of Ferrara, Alphonso de Este, once propounded the query of what trade contained the greatest number of persons. One said the shoemakers, another the sewing people, another the carpenters, the pettifoggers, the laborers. Gonelle, the famous buffoon, said that there were more physicians than any other sort of persons, and offered to bet with the duke,

his master (who flatly declined the honor), that he would prove it within four-and-twenty hours. The next morning Gonelle set out from his abode with a great nightcap on, and his chin bandaged up with a handkerchief, then a hat over all, and his mantle thrown over his shoulders. In this guise he took his way towards the palace of His Excellency, by way of the *Rue des Anges*. The first person he met asked him what was the matter with him, to which he answered: 'An atrocious toothache.' 'Ha! my friend (said the other), I know the best receipt in the world for that;' and rehearsed it to him. Gonelle wrote his name upon his tablets, pretending to write the receipt. A step further on he found two or three who put the same question to him, and each one gave him a remedy; he wrote down their names, as in the first instance. And thus pursuing his course through the remaining portion of the street, he met no one who did not offer him some receipt, all differing the one from the other, each one telling him that his own was well tried, sure and infallible. He wrote down all their names. Arrived at the lower court of the palace, he was surrounded (being known to everybody) by persons who, after learning his trouble, insisted upon giving him receipts, each one said to be the best in the world. He thanked them, and wrote down their names also. When he entered the Duke's chamber, His Excellency cried out to him from afar off: 'Oh! what is the matter with thee, Gonelle?' He replied, very piteously and in a whining manner: 'The cruelest toothache that ever was.' His Excellency then said to him: 'Ah, Gonelle, I know something which would quickly banish your pain, even were the tooth spoiled; Master Antonio Musa Brassanolo, my physician, never made use of a better. Do this and that, and you will be cured immediately.' Gonelle at once threw down

his head-gear and other appliances, exclaiming: 'And you, too, sire, are a physician. Look at my list, how many others I have found between my dwelling and yours. There are nearly two hundred, and I have passed through only one street. I will undertake to find more than ten thousand in this town, if I were to go all through it. Find me as many persons of any other trade.'" (Laurent Joubert, *Erreurs populaires au faict de la médecine et régime de santé.* Paris, 1578. Nevfiesme Chap. *Qu'il y a plus de médecins que d'autre sorte de gens.* p. 92.)

Gonelle did not exaggerate; this meddlesome system of treatment by receipts is represented by a whole army, which does what armies too often do in the field—ravage a friendly country. The cholera, in the presence of gossipy medicine, descends to the grade of a plague of the second order. When the uselessness of an absurd measure has been demonstrated, time has been lost, the disease has gained headway, and the physician finds himself in the face of accomplished facts, for which he cannot always escape responsibility.

"There are things which are convenient, there are other things which are not convenient; hence there is a system in medicine," was said some twenty-two centuries ago, by a physician of some distinction, who dwelt in Cos. Medicine as a system rests upon minute distinctions, as imperative as they are difficult of recognition. The profession do not always succeed in establishing them; incompetence accords less regard to them, but it succeeds less often. It is no more absurd to trust one's health to others than physicians, than it would be to get a poet to build a house, or an architect to lead a madrigal. I will remind mothers of the mishaps of Colin, in a certain fable of Florian: it is better to *keep the cows safe* than to go after them with a stick after they are lost.

Undoubtedly men themselves purvey receipts, but they do it with less ardor and blind faith than women do. The latter put their whole soul into it, so that one would say that their reputation was concerned, and that they had made a vow to assure the fortune of a certain number of remedies. I know some of them, and they are of the best, who have their favorite receipts written upon their cook-book, side by side with formulæ for puddings and gooseberry syrup, and who produce them with a perilous liberality. There is at the bottom a laudable and generous impulse to render assistance; but there is also a very wrong conception of what constitutes medicine. It is neither so simple nor so powerful as that. Empiricism levels a receipt at a disease, and believes it cured; rational medicine *manipulates* it and waits for it to *end in recovery*, which is quite a different thing.

The touters of remedies point to experience, as physicians do, but their *experience* is not ours. One of the greatest medical minds of the last century, J. Zimmermann, has devoted a voluminous work to establishing a salutary distinction between these two sorts of experience, resembling each other only in name, which proves at least that a close examination should be made before invoking this word. One of the favorite arguments of the purveyors of receipts is this: "I have seen this remedy succeed in a *like case*." A *like* case! I think you very daring to assert it. Do like cases exist?—and, granting the fact, is it an easy matter to make out resemblance, or the reverse? Reflection, aided by hard work, does not always succeed, but ignorance would surely accomplish it! *Cough* is a symptom common to twenty different diseases, and calls for a multitude of curative measures, which vary with its nature: now a lukewarm temperature, again cold water; in one case emollients, in another tonics. Medicine makes

distinctions, ignorance confounds things, and the patient suffers who is swayed by it. If people would devote to their health the sixth part of the attention they give to that of others, the general sanitary condition would be improved, and the supremaey of reason would be favored.

It is especially in the matter of the medication of children, that the *receipt* is in esteem; it is there, also, that it is the most dangerous; disease comes suddenly, its access is rapid, sudden changes occur, and exigencies are more pressing than in adults. Lost time means sometimes a lost child. There is danger in putting off sending for the physician, and folly in ending with what should have been the beginning. Montesquieu said of Paris: "Here one can die only suddenly: death cannot otherwise assert its dominion, seeing that there are on every corner persons who possess infallible remedies for every conceivable disease." (*Lettres persiennes*, 1, lviii.) Things have not changed in this respect between 1714 and 1869, and they occur in the provinces just as they do at Paris; to-day resembles yesterday, and to-morrow will resemble to-day. Poor medicine! poor humanity!

CHAPTER IV.

USELESS AND DANGEROUS MEDICINES.

"Où il n'y a pas de mal il ne faut pas d'emplâtre."
FRENCH PROVERB.

"Un poison bien manié devient un médicament; un médicament dont on use mal devient un poison."

I AM tempted to confound these two words. A useless medicine easily becomes a dangerous one, and this in several ways: by the abuse one is tempted to make of it on the strength of its reputed innocuousness; by the loss of time which might be usefully employed; and by the habits to which it gives rise, and which it is difficult to lay aside without a certain peril.

The medicines which incompetent systems use and abuse are of two sorts: (1) medicines *of precaution;* (2) the reputed medicines *of necessity.*

To take medicines by way of *precaution*—that is to say, to give one's self a temporary disease (for the action of medicine amounts to nothing else) for the purpose of preventing an ulterior disease, is the height of absurdity. There was a time when, upon the slightest headache, people hastened to the *sangrador* to be bled more or less copiously; when every season, if not every month, had its proper course of drugs: at one time depuratives, at another an emetic—purgation always. It was the depoetised supplement of Flora's calendar. In many localities

these prejudices still obtain, and they are the starting-point of a system of immoderate dosing, of which true medicine is sooner or later called upon to repair the damages. If people took as many *precautions* as *drugs*, their health would be signally benefited; but a purgative is more easily endured than a privation, and precautionary observances involve something severe and unpleasant, which makes them willingly neglected.

As to medicines of *necessity*, they should be allowed only when the necessity is not *supposed*, but *demonstrated;* by whom, then, can this be done, except by physicians? Doubtless they also are deceived; but with which side are the chances of right, with those who do not know, or with those who have learned? It is truly sad to see reason yield to such palpable snares; but it is still more deplorable to see it contented and not seeking to free itself. It never finds so many stumbling blocks as when it comes in collision with sanitary matters, and, had I to write the history of its failures, I should not wish to seek elsewhere for materials.

People readily believe that medicines taken in the absence of disease constitute a sort of reserve fund of health A few days ago, a child eight years old asked of me a medicine which he had seen one of his brothers take, the appearance of which attracted him. "You have no need of it," I said to him; "you are not sick." "Give it to me, and I shall be still better," replied the child. How many gray-beards reason in this way! I have known families who *refreshed* themselves and *depurated* themselves upon a certain day; others, who all took tansy, wormwood-wine, or semen-contra together, on certain occasions arranged beforehand. We should laugh at such practices if we met with them in Oceanica, but for our own we have an interested indulgence.

It must be confessed however that most of the prejudices of domestic medicine are but the sorry errors or routine ways inherited by legitimate medical centuries ago. Whatever there was of good in it has not been taken, but with rather obstinacy its grossest theories and the least justifiable of its practices have been preserved, as weapons against the medicine of the present, incontestably wiser and more enlightened than the other. These *anachronisms of two or three centuries* are revealed in an *obsolete* language, borrowed from the erroneous inspirations of an exclusive humoralism. Every day we have to battle against the consultant from beyond the tomb, who bids us aid him in repressing humors that have broken bounds, to quiet a wandering irritation, to disembarrass organs, to combat the acridity of the blood. He speaks to us a dead language, which we do not understand; and the public, in its turn, does us wrong.

Among all these means, dear to popular credulity, there are some which involve the most obsolete practices. Refrigerants, depuratives, antilactescents and vermifuges are the staples of domestic medicine, the despair of physicians and the fortune of charlatans. What is inconsiderately compounded of the juice of herbs, of Portal syrup, of Provence cane, and of remedies against worms, is as inconceivable as it is disgusting. Nothing of any consequence is refrigerated; nothing is depurated; a great struggle is made against the fancied migrations of milk; hypothetical worms are killed; but routine is satisfied, likewise the dealers in orvietan.

I know full well that ignorant mothers are taken by these baits; they hesitate, they are not conversant with such matters; they run to the empiric's cart like larks against a mirror, and, convinced that they have made a good bargain, they exchange the products of a day's work

for a yellow or red drug which is good for everything—a bruise, as well as a bronchial catarrh; an inflamed eye, as well as a disordered stomach. "The highway robber," says Tissot, in his *Avis au peuple*, "at least leaves you the double resource of self-defence and the chance of assistance; but the poisoner who plays upon a patient's confidence, and kills him, is a hundred times more dangerous and culpable." I was present yesterday at one of those hateful snares laid, in an open public place, for credulity by an impudent charlatan, and sadly asked myself, why does not the law protect the people against this avaricious spoliation, until such time as the public, educated to a higher standard, shall be able to look after its own defence?

I prefer to warn mothers, rather than to frighten them; but yet they should know that at the beginning of a disease an insignificant or useless remedy may prove as dangerous as the most active medicine improperly administered; and this for the very simple reason that it inspires a false security, and causes precious time to be lost. If, then, time is money, as the Americans say, it is also health, and sometimes life; and to squander it is as foolish in the one sense as in the other. Don't say: "*I have done nothing, therefore I have done no harm.*" The draught of violets or pellitory which, in an urgent case, should have delayed the calling of a physician for two days, would have been a fine poison, lacking only the dramatic aspect. The value of time! when is it felt less than in matters pertaining to health, and when should it be felt more? Simple medicine is that of simple people, I should say frankly, were I not desirous of avoiding an impolite, although fully justifiable, saying.

The pharmacists (whose calling is worthy, exalted and exacting, when properly exercised) have to bear the un-

generous and ruinous competition of empirics; it must be remarked that some pharmacists, happily only a few, revenge themselves upon physicians and the public by prescribing as well as dispensing their drugs. The *remedy* against cough, diarrhœa, flatulence, etc., is by this meddlesome system sold without the prescriber seeing either the child or the disease (they would then see that things were going no better), which inspires a perilous sense of security, and almost always ends in a tardy appeal to the physician, thus leading to loss of time and frequently to a catastrophe. A profession thus connected with that of medicine, and involving, like it, grave responsibility, should always be on its guard against such abuses.

It would be very difficult to explain to mothers the differences between a drug and a remedy. The *medicine* is in the apothecary's bottle; the *remedy*, in the doctor's head. A drug is in itself either good or bad: it is good when administered on proper occasion and in proper dose; bad when improperly employed. A mental process, then, is necessary to make a drug a remedy. But, pharmacists, however well trained, are unskilled in this process; still more unskilled are laymen, who, nevertheless, are great vendors of miraculous receipts and advocates of infallible remedies. "This measure cured such and such a child." Such is the sacramental set speech of the propagandist of remedies. If an absurd measure have by chance proved successful, so much the worse, a thousand times the worse, for humanity will have to pay dearly for it, unquestionably.

"The humblest art must be learned," says Tissot; "old scraps of leather are not patched up except after an apprenticeship, and yet this is thought needless for the most necessary, the most useful, the most beautiful of arts! A

watch is confided for repair only to some one who has spent years in studying its structure and the causes which derange its action, and yet the task of repairing the most complex, the most delicate, and the most precious of all machines is entrusted to those who have not the slightest notion of its structure, of the causes of its movements, and of the agencies which may restore it!" Alas, yes.

Besides the remedies which are hawked about in the streets, or those of gossip, there are also those of the pompous newspaper advertisements, which deceive more people than the streets. The infallible specific, ranging from Vatrin's dog-remedy to a pomade for renewing the growth of the hair, is irresistibly seductive to credulity. Yet we say to mothers that, if it be folly to run after such catchpenny drugs for themselves, it is a crime to make their children undergo their useless or dangerous experiments. They are disposing of something which does not belong to them, playing with health, as others play at the money market, with borrowed capital. How gross is the snare, what humiliation there is in an advertisement!

There is another danger in ready remedies: they are used on the slightest pretext. I have known children *drugged* at every turn; they passed their lives between vomits and purges, a depurative and a vermifuge, all by fits and starts, according to the impulse of the moment or casual advice. It is pitiful to see children, to whom a regular regimen is so important, thus played upon, without rhyme or reason; what can possibly become of their health and development under this empirical brutality?

Few medicines, and these few well-timed, imperatively called for, and directed by the physician; more than that involves accidents and peril. Mothers should not forget this.

But, besides useless, absurd, or trivial, there are also

dangerous remedies, those which produce immediate bad effects, and it is not out of place to mention them, were it only to arrest the mania, prevalent in some families, of playing with medicine.

I will first instance opium and the preparations which contain it. The extreme impressibility of children to this substance is a notorious fact in medicine, and the younger they are the more marked it is; so that it should *never* be prescribed for them, except by the physician. A single drop of laudanum has been known to cause the death of an infant at the breast. It should be used sparingly even in external applications. It is easily absorbed through the skin, especially in infants, and may lead to fatal consequences, or at least to useless narcotism. Syrup of diacodium, or syrup of white poppies, produces the same effects, and the ease with which any one can procure it makes it truly perilous.

I will not speak of that murderous practice, generally prevalent among the poorer classes in England, and which has taken root in some of our Southern departments, consisting in giving opiates to children of tender age for the purpose of hushing their cries. It will readily be seen what becomes of these *thériakis* in swaddling clothes, when indeed they are not directly poisoned.

Poppy clysters are in the highest degree dangerous, especially for children, and mothers should renounce their use. I have seen very grave narcotism supervene in an adult in consequence of them; they are more commonly used, and much more dangerous, for infants. Poppy heads vary in size; they are gathered at different periods of growth, and they contain more or less morphine, etc. The extreme impressibility of infants forbids their being subjected to such hazards. Laudanum should take the place of the poppy in injections, which, by the way, should be prescribed by physicians.

The powders, unguents, pomades, and solutions, of secret formulæ, sold by charlatans, may at any moment produce grave accidents, or even fatal poisoning. Buchan quotes the case of a girl who, having taken as a vermifuge a secret powder purchased of an empiric, died of poisoning the same day. The annals of science teem with instances of poisoning produced by dangerous substances employed inwardly, inspiring by that very fact a false security. This is true of stramonium, of belladonna, of tobacco, and of hemlock; now of a pomade reputed to be harmless, but containing arsenic; again of a vegetable depurative syrup containing mercury, etc.: ten pages would not suffice to enumerate the accidents produced by this empirical medicine, and yet most of them escape observation. The unjustifiable indulgence which is accorded to the failures of charlatans, and the severity with which ours are condemned, furnish a royal road for the former. It happens in this way: it is easier to make out that another has been deceived, than to confess that we ourselves have been duped. When will people acquire the wisdom to defend their health against such gross delusions?

I will let mothers draw a conclusion from the foregoing, or rather I will prepare it ready to their hand by referring to the motto of this book, which sums up the whole idea: "The mother should be the auxiliary and the intelligent instrument of the physician; it is foolish and dangerous for her to attempt to substitute herself in his place." Let them also apply this saying, addressed by a great physician to chemistry: "*Egregia medicinæ ancilla, non autem pejor domina.*" Mothers should get the eldest of their school-friends to translate this phrase for them. Under a somewhat irreverent form, it conceals a wholesome truth.

CHAPTER V.

THE FOUR COLUMNS OF MATERNAL MEDICINE.

On ne détruit pas aisément
Le préjugé ni l'habitude.

LEBRUN.

Chacun à son métier
Doit toujours s'attacher.

LA FONTAINE.

PHLEGM, wind, worms, humors. * * * What is in these four words! What a quintessence of routine! What pretexts for useless medication! What shackles on rational medicine! They are the four cardinal points of domestic medicine, and it is very rarely that maternal solicitude does not point, like a weathercock, towards one of them; unless, indeed, it oscillates from one to another. Montesquieu has said: "He who knows everything shortens everything;" he who knows nothing of complicated matters understands, nevertheless, how to simplify them—with only this slight difference, that his simplification is that of ignorance, which turns its back upon good sense.

The ancient physicians unchained these four elements, and they show no disposition to return into their caves. They continue to inspire domestic medicine, and to domineer over scientific medicine, controlling the confidence with which we are regarded, and often exacting from the greatest minds a submission of which they cannot but be

ashamed. Let us see what there really is under these labels.

The doctrine of *phlegm* formerly flourished among physicians; popular credence gave it shelter, because it was absurd, and still holds to it without any definite reason.

A child suffering from *phlegm* is simply a child who, by accident, or on account of some peculiarity of his bronchial and gastric mucous membranes, secretes a rather large amount of stringy mucus, still called, in a dialect borrowed from the medicine of past centuries, *phlegm*, or *pituita*. The first stage of a cold in the head offers the type of phlegm; it is likewise seen in certain cases of bronchitis and diseases of the stomach, and it owes its abundance to certain respiratory or digestive disorders which all physicians know perfectly well, and which they do not fail to take into account. These collections of mucus, secreted in excessive quantity upon the surface of the mucous lining of the air passages, are productive of serious inconvenience, and may indeed cause asphyxia. Certain constitutional peculiarities predispose to the secretion of mucus: pale, flabby children present the attributes of the lymphatic or the scrofulous constitution; they are prone to diseases of the hairy scalp, of the ears, or the eyes, and it is they in whom is shown this disposition to *phlegm*, to speak the language of an obsolete medicine. It should be taken into account in the medical and hygienic treatment of children. That is the simple truth in regard to this doctrine of phlegm, which is in such great vogue among mothers, and which leads every year to the manufacture of tons of Guillé's anti-phlegmatic tonic elixir, or other analogous drugs.

The false and dangerous part of it is, the consideration of the *phlegm* as a morbific principle, fixing itself upon

the mucous membrane, irritating it, travelling about in a capricious manner from one part of the system to another, presenting imaginary changes; and the opposing to this principle, which does not exist, *antiphlegmatics*, which also have no existence. It is simply and dangerously in vain to give antiphlegmatics, since it leads to loss of time. It would be better to go at once for the physician, especially since certain suffocative forms of catarrh, showing themselves under the influence of dentition in very young children, are mistaken for phlegm, and treated with trivial remedies. Most of the antiphlegmatics contain purgative substances. The little patients, not knowing how to expectorate, swallow the mucous plugs from the chest, and they are found in the passages, which is accounted a triumph of the antiphlegmatic. I do not deny that it would be desirable to free the digestive tube of these mucous collections, but there is quite a different and more urgent thing to be done, and that other thing is not within the power of a mother.

The physicians of past centuries gave vogue to *wind*, and it now plagues us with its vagaries. The common opinion, the faithful reflection of their own, makes wind travel from one part of the system to another, without considering anatomical facilities or obstacles; and a pain showing itself at any point whatsoever, in a person whose stomach is distended with gas, is attributed to a migration of this latter. The doctrine of wind arrested *between the skin and the flesh* is in high favor, and whoever attacks it smells of heresy. Hence the multiplicity of antiventous remedies sold by itinerant charlatans, or the blessed formulæ of which are handed about by oral tradition. This disposition to wind or flatulence in the digestive canal is peculiar to some persons. They feel it as an inconvenience not altogether free from danger, and,

in order to keep on good terms with their infirmity, they are obliged to take the precautions which experience has shown them to be useful, and to observe a particular regimen. But that is nothing imaginary; it is a natural disposition, sometimes hereditary, or an habitual feebleness of digestion.

But the thing is not thus understood by the maternal world; they consider wind not as an effect, but as a cause, and a great number of the diseases of young children are attributed to it. Can we wonder at it, seeing that, in 1803, the author of *Maternal Medicine*, Alph. Leroy, a man of a tolerably judicious mind, expressed himself in the following terms: "In children, wind traverses the open texture of their organism. It has sometimes been observed to fly to the head and produce convulsions, especially in cases of obstinate constipation; these sad accidents happen more particularly in children enclosed in swaddling clothes"? (2d edition, p. 84.)

Nurses and mothers still speak in this style. If it were only an erroneous doctrine, it would be of little consequence, and would be lost in the number of other like errors; but it is more serious than that. Grave accidents, even convulsions, occur. They are attributed to wind; certain gases accumulated in the intestines, and subsequently belched up, are always adduced in support of this theory, and, on the strength of such error, inoffensive, but useless, carminatives are given. The shadow of the disease is attacked, while the disease itself, badly treated, becomes aggravated, and sometimes arrives at a point where there is nothing more to be done. *The development of wind in the digestive canal is always the consequence of some other disorder, which should be ascertained. Except distension of the abdomen, and the embarrassed breathing which may result therefrom, all the dangers*

attributed to gases and their migration are purely imaginary. It is easier to give a *carminative* than to find out the cause which produces habitual flatulence, but it is also less efficient. The former is the part of routine, the latter, often difficult, that of medicine. We may, then, dismiss wind to keep company with phlegm.

The belief in the all-powerful influence of *worms* in the diseases of children is no less deeply rooted, but it rests upon more specious reasons, and needs to be more closely examined. That children, after weaning, are singularly apt to be infested by these parasites; that these may, for reasons which medicine cannot always ascertain, in one instance give rise to no serious trouble, and in another case prove the starting-point of the gravest accidents; that it is of real importance, on the one hand, to so order the feeding of infants as to prevent, as much as possible, the production of worms, and, on the other hand, to get rid of them as soon as possible—these are indisputable and undisputed points. But, where truth ceases, exaggeration begins, and this exaggeration, towards which all mothers—even the wisest—are singularly inclined, consists in seeing worms and verminous diseases on all occasions: a fever is kindled—it is worms; an attack of convulsions occurs—worms; the child is losing flesh—worms; he is restless during sleep—worms. Then comes, as a logical sequence, a series of vermifuges, beginning with Corsican moss and ending with santonine. If the child pass worms, there is a triumph; if it pass none, there is no confession of a mistake. Maternal *amour-propre* has invented the convenient theory of the *digestion* of the worms. They are not expelled, but are digested; they have been shorn of their power; the result is the same, and the doctrine is glorified. It cannot be denied that it is ingenious.

I know families whose children have to undergo periodically, for a term of three days (that mystical number being considered propitious), the common infliction of a vermifuge, that new-fashioned *tanguin*. When only slightly or not at all ailing, these vermifuges, belonging to the class of purgatives or bitter tonics, do not really do them any harm, and he who would condemn such a practice must feel himself elevated to a high pitch on the stilts of a system jealous of its privileges; in nine cases out of ten it is simply useless, and that is all; but there are two conditions under which it becomes dangerous: (1) When, instead of Corsican moss, castor oil, or semencontra, compound vermifuges are used, of which neither the composition nor the effects are known, which are often excessively expensive, and which do less harm to the worms than to their possessor; (2) when mothers, seeing their children suffering from certain grave symptoms, look upon them, with or without the confirmatory verdict of a jury of matrons, as due to worms, and consequently omit to call a physician in time. There is real danger, especially in case of convulsions; it is possible that worms may be the cause of them, but it is much more probable that they have nothing to do with them, and the diagnosis is never so easy as to render the advice of a physician superfluous.

I have yet to touch upon the last of these popular idols —the doctrine of *humors*. The world of mothers clings to it most remarkably, and I don't know how they will take what I am going to tell them. *Bile in motion, acrid and heated blood, scattered milk*, the *dartrous humor*, etc., stand in high favor among them, and constitute their four essentials. They evoke them, they make them travel, transport them from one organ to another, and ply them with a category of medicaments calculated to exterminate these

peccant humors, *which are unseen, but therefore all the more treacherous.*

In 1818, Fournier, a physician of unusual sagacity, wrote the following upon the doctrine of humors: "Until quite recently, every medical book which appeared was pervaded with vague speculations, in which the humors were personified, as it were, and conspired diligently to develop all sorts of diseases. In one case, the bile became putrid, producing putrid fevers and even inflammations; in another, the lymph became thickened, or became injuriously acrid; the blood became impoverished, dissolved, heated, or putrified. Let a person show any cutaneous eruption, and they did not hesitate to attribute the phenomenon to an acridity lurking in the blood, or, still more vaguely, in the humors at large. Even the itch, which is known to be owing to the presence of an insect, was the product of an acrimony, of the combustion of the bile, or of a saline state of the phlegm. If any woman who had been a mother felt the slightest derangement of her health, her *milk* had been *scattered.* Every one knows what an important part the lacteal metastases (*displacements of the milk*) have played in medicine. If a puerperal woman showed some febrile disturbance, accompanied by delirium, a symptom prone to declare itself under such circumstances, for a certainty it was the milk gone to the head; in case of abdominal pain, the milk had gone in that direction. * * * The routinist had always ready a *virus*, a *humor*, or an *acridity*,—*hidden*, but ready to develop itself at short notice."

Maternal medicine is always some centuries behind scientific medicine, hence one of the most fruitful sources of embarrassment and misunderstanding between them; it still believes, like Sganarelle's public, "in the massing of the humors in the hollow of the shoulder-blade, and in

the acridity of those engendered in the concavity of the diaphragm ; " but it cannot plead the excuse of Martine's husband, who practised medicine in spite of himself. It does it for love of the thing, and, what is worse, thinks it creditable. It is so simple and so seductive ; you decide that a humor is altered, you follow in its tracks, you find it, and you open the door for it by means of a depurative or an evacuant. After that, people may well wonder why physicians spend their lives in study.

The longer a prejudice has stood, the more solid it is; the acorn has become an oak, and it will be a long time before the tenacious ideas of which we have been speaking will be uprooted from popular belief. Their very grossness gives them the false semblance of truth, and the arguments by which they could be combated, being purely scientific, are ruled out. It is discouraging, and yet argument keeps moving, penetrates, multiplies, and makes itself understood through loss of time and through useless medication, to say nothing of accumulating humiliation of spirit. The first duty of a mother is, to nurse her infant; the second, to forget what she thinks she knows about medicine. Let her abjure her ideas concerning phlegm, wind, worms, and humors; there will still remain enough of them to embarrass her physician's action, to the prejudice of her children's health.

CHAPTER VI.

DOMESTIC PHARMACY.

Rien de trop.
Dans le doute, abstiens-toi.

CHILON.

FOR good reasons, I would not place many drugs in the hands of mothers ; and yet it is necessary that they should have at their disposal a few of the more common substances, but only to be used in case of need, or by the direction of a physician.

It is embarrassing indeed, to be found unprovided in case of sudden illness or accident, and to have to send to an apothecary in the middle of the night (his sleep, for that matter, should be respected) for an ounce of syrup of ipecac, or a grain of tartar emetic. And yet this is very frequently done. By such a course, time is lost, servants are scattered at a time of excitement when they are wanted, and, if one be living in the country at some distance from help, there is the danger that the remedies may not arrive until there is no further need of them.

Domestic pharmacy, such as I understand it (and such as I must understand it, to remain true to the fundamental idea of this book, which is, to wean mothers from their tendency to act the doctor's part), should not be very complicated. It may include the following articles:

(1) Syrup of ipecac, in two bottles of two ounces each, which should be successively replenished as soon as their contents are used up ;

(2) Five powders, of 40 centigrammes [about seven grains] each, of ipecac, in a thoroughly dry, glass-stoppered bottle;

(3) Four powders, of five centigrammes [about three-quarters of a grain] each, of tartar emetic, preserved in the same manner;

(4) Four powders, each containing a teaspoonful of alum;

(5) Ten powders, of 25 centigrammes [nearly four grains] each, of Chinese rhubarb;

(6) Sixty grammes [about two ounces] of ammonia water, of the strength of 23 per cent., in a glass-stoppered bottle;

(7) Two ounces of castor oil;

(8) A bottle of ether;

(9) One ounce of solution of [subsulphate] of iron, for stopping the bleeding from leech-bites;

(10) A box of mustard paper;

(11) A roll of adhesive plaster, enclosed in a [tin] box;

(12) A piece of English blistering plaster, preserved in the same manner;

(13) Some amadou [German tinder], and a few pieces of English court plaster, or, better still, of gummed gold-beater's skin;

(14) Some absorbent powder, such as punk, rice, or starch;

(15) A bottle of Epsom salts;

(16) Substances designed for the preparation of the usual drinks (cleansed barley, linden, orange-leaves, violets, chamomile, etc.), in impermeable envelopes.

At the risk of offending some mothers, and especially English mothers, if so be that this book shall pass beyond

the Channel,* I have not included the inevitable bottle of arnica. This omission was intentional, and I had two reasons for my offence. In the first place, I am not convinced that that *panacea for falls*, as it is termed, possesses the wonderful virtues with which it is credited, and I am very much inclined to think that, when applied to bruises or to effusions of blood, it acts rather as alcohol than as arnica, and that ordinary spirits of camphor may be substituted for it; in the second place, it seems to me dangerous to rest in absolute security merely because a few drops of arnica have been given internally to a child who has just had a severe fall. Whether arnica has been given, or whether it has not been given, there is occasion for medical advice at the very moment that the immediate effects of a fall exceed a certain point. Cases of severe concussion, or commotion of the brain, demand different and more energetic measures.

It will have been noticed that pastes and syrups do not figure in this domestic outfit; besides the fact that the latter are difficult of preservation, their efficiency is usually questionable, their surest effect being the levy which they make on the purse. The really active syrups, that is to say, the medicinal syrups, are prescribed and administered by order of the physician, and those are not now referred to. I speak merely of the syrups which are sold as cough-remedies, the fanciful and money-making formulæ of which are multiplied every day. These syrups are very expensive; they leave a bad taste in the mouth, impair the appetite, cause loss of time, and lead to nothing.

* A bibliographical notice of this book, and a very gracious one, recently published in an English magazine, closes with the significant words: "French mothers will do well to learn this work by heart; *English mothers will read it with profit.*" The contrast is just, to a certain extent. . . . Let us hope that it will soon cease to be so.

It would be well to keep the substances which we have enumerated in ground-stoppered bottles, with glass labels. Little portable medicine-cases might be made for them, furnished with a lock and key; the drugs would thus be well preserved, and would be prevented from giving rise to the accidents which some of them might cause, were they, as is the common practice, ranged in disorder upon shelves accessible to all, children as well as servants.

Every intelligent family should have one of these portable medicine-chests, the sale of which, by the way, should rest exclusively with the pharmacists, who should sell them only on the order of a physician, and who should enter in a register, arranged for the purpose, an index of the persons to whom they have been sold, and of the physicians who had signed the orders. In this way the objectionable features would be overcome, and we should no longer have to point out every day the unfortunate consequences of tardy treatment.

It should be remarked that this proposal is made only with the view of regulating an habitual practice, and, at the same time, of rendering it more harmless and more effective.

Physicians do not always freely consent to these pharmaceutical outfits; some of the drugs are active in doses of a few drops, and there are houses in which, in case one cared to institute a strict search, there would be found, here and there, bottles with stoppers of varying degrees of insufficiency, often without labels, and sometimes containing substances dangerous in their very nature, or on account of the confidence reposed in them, however altered they might be.

There is no such thing as mediocrity in drugs; they are either excellent or detestable, a fact which we have daily opportunities to perceive in families. The oils are

rancid, the powders damp, sometimes mouldy; the aromatic substances have lost all odor, the diachylon is scaly, and has lost all its adhesive property; in a word, we no longer know what we may depend upon. Moreover, certain ill-preserved or very old drugs may become dangerous. Take ordinary laudanum as an example. If it is kept in an open bottle, not only does it become decolorized (which is of minor importance), but it evaporates; its narcotic principles become concentrated, it gets to be more active, and the untoward result, in the case of infants, to whom this medicine is sometimes given in one drop or even half-drop doses, may be imagined.

The only weighty argument which could be adduced against this idea would be, the fear that the mother would put herself in the physician's place, and think that she had the whole art of medicine in her little box, as Paracelsus carried it in the head of his cane. But this objection is overcome by the fact that I add nothing to the pharmaceutical resources at her disposal, or which she can have at her disposal, at any given time. I will add, that I shall have signally failed in my undertaking, if I shall not have inspired in mothers, by all that I have thus far said, a sense of their utter unfitness to play the physician, of the difficulty that we, in common with other physicians, find in doing it passably well, and of the weighty load of responsibility which they assume in encroaching upon a field which is not their own. Moreover, I have not yet finished my warnings upon this point.

I have used the term *portable pharmacy*, and there occurs to my mind the most portable of all, the homœopathic pharmacy. Little boxes, little tubes, little globules, little security. I need not touch here upon the scientific aspect of this doctrine, which has won its position by its oddity, and which keeps its ground only by its curious

practices, and by the singular predilection of the human mind for the absurd. I will simply say to mothers: "Beware of it: either the pellet doses of active substances, such as *arsenicum album* or *aconitum*, are large doses of the ordinary form of the drugs, and then you run the risk of *doing harm;* or else they are really homœopathic, in which case you run another risk not less perilous, that of *doing nothing.*" No, it is as true of drugs as of prudence and good sense; their efficiency is not in inverse proportion to their dose. Prudence demands then, that, in choosing between two doctrines—one of which, of recent origin, makes head against reason, and reckons among its followers but a comparatively insignificant number of men of scientific attainments; the other of which is approved by time and consecrated by an overpowering weight of opinion,—we should unhesitatingly follow the ordinary path, that of the whole world, that of common sense. The intellectual cast of women renders them, it is said, more open to the blandishments of systems clothed in novelty and bedecked with dazzling points; most assuredly this is a pure calumny. They may safely be trusted to prove the fact, and I need not insist that they should sedulously close their ears to the vain and mercenary promises of homœopathic medicine. I will merely point out that odd inconsistency of persons who mix up homœopathy and allopathy in a strange salmagundi, and that still queerer inconsistency of certain homœopathic physicians, who offer patients their choice of the one or the other of these two methods of treatment. One must hold either to Geneva or to Rome, and I am unable to perceive in this spirit of accommodation any evidence of a very strong faith. It is conviction suspiciously dilute. . . . But I am slipping over a declivity, and judge it prudent to stop.

CHAPTER VII.

INDISPOSITION AND DISEASE.

Nous ne croyons le mal que quand il est venu.

LA FONTAINE.

Quand les chevaux sont échappés, on répare l'écurie.

GERMAN PROVERB.

THERE certainly are cases of indisposition to which it would be puerile to call in the physician, but they are not as frequent as is commonly supposed, and it is always better to call on him unnecessarily than to postpone his visit when necessary. In such a course, there is the double advantage of not losing time and of affording the physician the opportunity of watching the disease from its outset, which is of great importance, as furnishing him with facts in regard to its nature and to the proper course of treatment.

The distinction between *indisposition* and *disease*, is doubtless delicate; but it is not always beyond a mother's ability to perceive, provided that she, being wise as well as enlightened, recognizes thoroughly the limit of what she can do and what she ought to do, and holds firmly to the resolution to yield on the first doubt. There are certain characteristics which, in most cases, allow of a judgment as to whether the attack is simply an indisposition or a settled disease, and it will be useful to enumerate these here.

(1) *Rapidity of Onset.*—Simple indisposition ordinarily exhibits no precursory signs, and has no stage of convalescence; being a mere accidental derangement of

health, its impression is but transitory. Serious diseases, on the contrary, are generally preceded by *malaise* for several days; the children are less disposed to play; they show an unaccustomed moroseness; they are more or less intractable and irritable in demeanor; they are apt to seek rest; their appetite is excessive or diminished; they sleep badly, sleep being interrupted and disturbed by dreams; slight convulsive movements or twitches are observed in them; the countenance is more or less dejected; the complexion is pallid; the eyes are surrounded by a dark circle; there is loss of flesh. When these signs are present, separately or together, and with a certain persistency, it is to be feared that a serious disease is threatened.

(2) *Emaciation.*—Children lose flesh and regain it with extreme rapidity; the condition of their flesh, then, is of very great import; but this very important sign is commonly very imperfectly interpreted. People are content with a gross estimate, as determined by a superficial examination, with scarcely ever a resort to the balance, which so correctly reveals the slightest fluctuations of flesh.

I shall presently insist upon the advantage of weighing children at least once a month, and even at shorter intervals, whenever their health appears to suffer any appreciable impairment. I attach considerable practical importance to this practice. A well-nourished child, who is only jaded by work or exercise, should maintain his weight, and even increase it; growth, while producing increase of stature, should not, if of a healthy character, lead to diminution of weight; so that, when the latter occurs, with a certain persistency, it is a sure index of a morbid condition, which the physician should repair.

When a child loses flesh, the words *worms*, *dentition*

and *growing*, are pronounced, and that is all that is said about it. Put no faith in them. *Worms*, much less common, and much less dangerous than is supposed (as we have already said), are a cause of emaciation only when they are present in considerable number; moreover, other special symptoms are produced, and the child passes worms at more or less frequent intervals. *Dentition*, which is but too readily trumped up as an occult cause of emaciation, can be admitted only when the process is evident, and when it is accomplished in a somewhat tumultuous and irregular manner; under other circumstances, this explanation is purely hypothetical, and really dangerous. It becomes especially so whenever an habitual diarrhœa exists, invariably attributed by mothers to the influence of the teeth, and looked upon by them as a favorable crisis, which should be encouraged. A child who has grown very thin, is commonly a child in whom an acute disease *is impending*, or in whom a chronic disease has already *begun*. Brain diseases almost invariably begin with a progressive emaciation, and this symptom, provided it cannot be explained by one of the causes indicated above, becomes sadly significant to the physician.

One cause of emaciation which it is also desirable to know, although of a purely moral sort, is the jealousy which certain children feel, even very young ones, when they think that other children, upon whom they see care and caresses lavished in their own presence, are preferred to themselves. Sad and precocious example of the ravages which the passions can exercise upon health! St. Augustine has drawn the portrait of a jealous child, "who, with pale face and troubled eye, regards another child who sucks with it;" we meet them from time to time, but at this age the passions are freely expressed, not concealed, and so it is as easy to recognize this cause of emaciation as to remedy it.

It will be seen that it is necessary to keep a close watch of children who are losing flesh, without being content with mere words, and to lay the problem before the physician; there is almost always urgent need of solving it.

(3) *Changes in the Character and Demeanor.*—The child lives outside of himself, and there is, in the expression of his desires, of his physical, moral, and intellectual necessities, a spontaneity and a vivacity which facilitate the appreciation of the slightest changes in his character. Indisposition, as well as disease, leads to certain moral modifications; but the former shows itself in the form of *demands*, the latter (nearly always), by *apathy*. I do not affirm that this contrast always obtains, but I give it as at least a very general rule. A child indisposed is a grumbler, a child suffering from disease is dejected; and to such an extent is this true, that observing mothers rejoice, and with good reason, when they see their sick children become refractory and imperious: it is a truly valuable sign of convalescence. The *indisposed* child rebels against his uncomfortable sensations; he feels a desire to live his ordinary course of life; to play, to run, to eat as usual; but his discomfort prevents him. He revolts against it, cries without assignable cause, shows a desire for a thing, and immediately rejects it, finds fault with everybody, and passes from one demand to another. The child *with disease*, on the other hand (including also the child about to become sick), is bewildered rather than irritated; there is diminished activity, he seeks repose rather than caresses, and his little countenance is neither lighted up with a smile, nor clouded with ill-humor; he assumes *the serious air of an adult*, and seems to feel a presentiment of impending physical suffering. There are differences between these two pictures, which mothers and

physicians accustomed to the observation of young children seize upon with marvellous perception.

Gayety is one of the child's functions; he has the happy source of it within himself, and is able to produce it without external conditions being necessarily favorable. However short a time that spontaneous expansion of the soul may last, it nevertheless exists. Indisposition suppresses it for the time being only; it revives between its disturbances, conceals itself beneath a tear, shines out anew in a smile, is reassuring when it is present, and begets well-founded anxiety when it no longer shows itself. A sad child is a painful anomaly; his sadness is often also a warning, of all the more serious import if his grief and cries be not accompanied by tears. *If the eye be dry, the disease is grave:* this is presented to the mother as an aphorism; it will rarely be found at variance with the truth.

(4) *Listlessness and Apathy.*—Motion is the proof of life; the child whose life is occupied with his playthings shows a singular activity; he remains not an instant still in one place. There is room, then, for anxiety, when he shows a desire for repose. This dubious *calmness* is, moreover, all the more portentous in proportion as the child was more lively, more of an *imp*, as mothers say, *i. e.*, the more he previously made the house resound with his graceful and turbulent activity. It is particularly as a presage of diseases of the brain that this unaccustomed apathy is of serious significance. A child, however fine his appearance, who dislikes to move about and play, who willingly remains seated for whole hours on his little chair, as if absorbed in himself, following his comrades' gyrations with a sort of listlessness, is a threatened child. Alas! how many mothers there are to whom this picture will bring back painful memories! * * * *

In observing families, an indisposition which is amenable to domestic management can generally be distinguished with tolerable facility from a disease which imperatively calls for the physician's care; but cases are not as distinctly marked in practice as they are in books, and it will be prudent not to waste, in conning over doubtful signs, time which might better be employed in instituting an effective treatment. Let the physician be called, then, whenever the signs which I have mentioned above occasion anxiety, and the responsibility will then be placed where it belongs.

Fever, cough, vomiting, and diarrhœa, are symptoms common to mere indisposition and to serious diseases; but, in the two cases, they show features of detail, the interpretation of which is not beyond domestic ken.

I must enter upon some details in regard to this subject.

Fever, in children, may mean either nothing, or the commencement of almost anything. I know not who has said of them that they are the *charlatans of fever*, but I do know that the saying is true. There are children who have fever on any and every occasion. It is said in families that they are *feverish*. Over exertion, fright, an error in diet, etc., is sufficient to cause an attack. There are some of them who cannot grow a millimètre [.03937 of an inch] without an accession of fever; others, in whom it is kindled by the slightest irritation of teething. Moreover, all diseases of internal or external causation are extremely prone to light up fever at this age, and, as children are, equally with adults, if not more than they, subject to the various forms of periodical or continued fever, the part which the febrile movement plays in them will easily be understood. Moreover, does not their extreme functional activity constitute a sort of permanent physiological fever? * * * *

If fever be moderate, or unaccompanied with any unusual phenomenon, if neither extreme languor nor severe headache, nor cough, nor delirium be noticed, we may rest content with simply watching it; at the end of ten or twelve hours, everything will have been restored to the normal condition. If intermittent fevers prevail in the neighborhood, and the attack has been preceded by chills, the physician should be called, that he may judge of the propriety of giving a febrifuge. The same should be done if the fever persists longer than the time above mentioned; in such case it becomes probable that the affection is an eruptive fever (measles, scarlet fever, varioloid, or chicken-pox), or a continued fever (enteric or typhoid fever). If, together with fever, there be nausea, or indeed vomiting, a hoarse, resonant cough; if the eyes water and look uncommonly brilliant, if the child sneezes frequently, it is extremely probable that *measles* is in course of development. If the fever has been preceded by chills, if there be severe pain in the head, with soreness of the throat, and an extremely frequent pulse, there is strong reason to suspect *scarlet fever*. If the fever be very high, with lassitude, vague muscular pains, but particularly located in the loins, and existing there in great intensity; if there be wanting the characters which I have just assigned to the onset of measles or scarlet fever, there is strong probability that we are dealing with the onset of a *variolous* affection (small-pox, varioloid, or chicken-pox). A knowledge of the actual presence of one of these eruptive fevers in the neighborhood aids powerfully in the diagnosis.

In this connection I will show the impropriety of not calling the physician, even for a very mild eruption. Doubtless it would end in recovery without him; it is an affection for which only a moderate temperature and

diluent drinks need be employed; but things do not always go thus: moreover, it is important to know if the case be really one of measles or scarlet fever, in connection with the matter of convalescence and the length of time during which the patient should be kept secluded, also in regard to the necessity of taking precautions subsequently, in the presence of a fresh epidemic. It is also necessary to distinguish *roseola* from *measles*, and mothers seldom fail to confound the two. Roseola is accompanied with less fever than measles is; its eruption consists of rose-colored spots of various size, separated from each other by intervals of healthy skin; it is not contagious, and does not afford the slightest protection against future attacks of measles. Nothing is more common than to hear it said in families that a child is undergoing its third or fourth attack of *measles!* they were simply roseola. It is a useful distinction to establish.

As for the continued fevers (enteric or typhoid fever), they are ushered in by long-continued disorders of the digestive passages and of the nervous system; one must have his eyes shut not to see that something grave is impending, and to cling to the groping inactivity of household medicine.

Cough may indicate only a mere indisposition, if, for example, it is connected with a slight catarrh, without fever, with an irritation of the mucous lining of the larynx, with intestinal worms, or with dentition; but it also may be the index of a more or less serious disease. It will be convenient here to establish a distinction between a recent, accidental cough, and habitual cough.

The former may depend on a simple catarrh; if there is no fever, nor embarrassed breathing, nor pain in the side, the physician need not be called; under other circumstances, he should be. It may be the prelude of

measles: the existence of more or less fever, in cases of this disease, and the concurrent signs just mentioned, furnish a really strong probability. Finally, it may bode whooping-cough, or announce the invasion of croup.

Whooping-cough, I must here remark, is far from being the mild disease it is commonly accounted.* There certainly are cases which domestic medicine is competent to treat, but people keep company with dangers that they have not seen. In the first place, there are grave epidemics of whooping-cough, in which there is quite a profound alteration of the blood, with a tendency to hæmorrhage from the nose, and to the intercurrence of serious affections of the chest. In the second place, it is not devoid of danger to allow whooping-cough to follow a protracted course, as is done among the lower classes, by whom this disease is commonly left to itself. Like all diseases of the nervous system, it wears the yoke of habit, and the longer it has lasted, the more obstinate it is. Then, again, we should take into consideration the accidents, often irremediable, which follow in its wake. How many children have been doomed to life-long suffering from asthma or palpitation of the heart, on account of a neglected whooping-cough! Whooping-cough, then, demands treatment, and careful treatment.

Cough is the horror of families, especially when it assumes a certain hoarse character. The terrifying thought of the croup rises up before the mind, and the vision of "the night-hawk," as a poet styles him, ready to launch himself upon the cradle and strangle the infant in his cruel grasp. Indeed, there is cause to tremble: the frightful gravity of the disease, the gloomy prospect of a surgi-

* Four hundred and sixty-five deaths from whooping cough were reported to the Health Department as having occurred in the city of New York during the year ending March 15, 1872.—F. P. F.

cal operation, the sufferings of agony, all conspire to justify terror. Most happily, besides the true *croup*, there is what is called in families the *false croup*, with nothing of croup about it but the name.

I think that I shall be rendering mothers a service by teaching them how to distinguish the one from the other, thereby sparing them many needless alarms. *False croup* is, in truth, only a nervous affection of the larynx, and never of itself causes death; so that the panic which it creates in families is not warranted. It is distinguished from true croup by the following characters: it comes on suddenly towards the middle of the night, either during perfect health, or in the course of a trifling catarrh. Once the initiatory suffocative attack is over, a normal condition is restored, lasting until a second or a third paroxysm. Pale, nervous children are, while suffering from dentition, particularly inclined to it. *True croup*, on the contrary, is usually preceded by several days of *malaise* and fever, with throat symptoms; the voice becomes hoarse, feeble, or extinguished, and a marked whistling sound is heard upon each entrance of air into the chest.

All long-continued coughs are dangerous, and if at the same time the child suffers some loss of flesh, we cannot but suspect the development of some serious disease of the lungs, and a close medical examination should immediately be obtained. It is particularly in these cases that precious time is lost by attributing the cough to *irritation*, to *worms*, or to the process of *growth*. The cough of irritation has no established existence; as for the two others, they exist, it is true, but it is not as easy as might be supposed to recognize them, and to distinguish them from the coughs which depend on chronic structural disease of the respiratory organs. It is advisable, moreover, in matters of domestic medicine, to guard against too much

optimism: groundless solicitude is better than vain regrets.

Many diseases begin with *vomiting*, or are accompanied by that symptom. When transitory and unaccompanied by other symptoms, it may depend upon mere surfeit, and disappear with rest and regimen; but persistent vomiting should excite anxiety, and call for the physician's attendance; indeed, it very often indicates that cerebral disease is impending, if not already begun. As to vomiting from indigestion, which speaks ill of the child's diet, it is easily recognized, and yields to the influence of diet and the usual simple measures.

A temporary *diarrhœa* is but a mere indisposition; but persistent diarrhœa is an element of serious disease, which is too often allowed to become aggravated by neglect. The idea is deeply moored in popular belief, that dentition cannot be going on well unless it be accompanied by a certain amount of diarrhœa, and, upon the strength of this idea, which undoubtedly contains an element of truth, although exaggerated, very dangerous diarrhœas are allowed to go on, until they lead finally to lesions, often irremediable, of the intestinal mucous lining. The number of children who perish annually from neglected diarrhœa is incalculable, and I cannot too earnestly bring this fact to the attention of those who have them in charge. Any diarrhœa which does not yield to regimen in the course of twenty-four hours, should be considered as possessing a serious character, especially during the hot season, at the South, during dentition, or soon after weaning, all of which conditions favor the development of that frightfully dangerous disease, *cholera infantum*, or the transformation of simple diarrhœa into the dysenteric form.

Having become able to distinguish an indisposition

from a disease, and that without the slightest doubt resting upon the mind, attention may be turned to domestic medicine—not drugging, but hygienic measures. These are included in three words: *rest*, the regulation of *temperature*, and that of the *diet*. With these three conditions attended to, nature is capable of taking care of the case, and if, by an error, scarcely ever committed by an attentive mother, the beginning of a serious disease has been taken for mere indisposition, this negative treatment will have prepared the way for the physician's action. "Doctor *Diet*," as the English say, is a specialist singularly skilful in the diseases of children; he should begin the conduct of the case, and should be retained in consultation when the nominal physician has arrived. Three-fourths of the transitory ailments of children come from overloading the stomach, and diet is for them the first and most precious of medicaments. "The mouth," says the proverb, "is the physician of the stomach;" it certainly owes it this reparation, after all the damage it causes it.

In a word, the great art here, as in so many other matters, is, to preserve a middle ground between exaggerated and fussy solicitude, and the imperturbable optimism which willingly blinds its eyes, and does not dream of the value of the time which is being irretrievably lost. "Stop an evil at its commencement; that treatment comes too late which lets it grow." I will close with this saying of Ovid's, which I would like to see inscribed upon every child's cradle. A great many cases of disease grow out of the neglect of a mere indisposition, which a sojourn in bed and attention to diet would have rectified; the omission of such simple measures makes things go ill, and the physician is obliged to interfere where he might easily have been dispensed with.

CHAPTER VIII.

DENTITION AND GROWTH.

Adorable tremblеuse, elle touche du doigt
Le point où va bientôt de la gencive rose
Germer cette dent blanche, objet de son effroi.

VICTOR MULLER.

Telle croissance, telle santé.

WE have so disturbed the natural conditions of health, by living a more and more artificial life, without regard to the laws of hygiene, that even our functions have in some sort become diseases. By way of example, nothing more is necessary than dentition and growth. What child is there living in any of our cities, in whom both are accomplished naturally, without disturbances or more or less serious accidents? We cannot admit that these two great functions were primordially beset with the troubles and dangers which now accompany them. It is we ourselves who have made them diseases, and a radical change in our customs and in our hygiene would be necessary for their return to their original regular condition. If I were asked, by what signs good health and a good constitution for the future could be predicted from infancy, I should not hesitate to point to a regular dentition and growth, as certain indications of a vigorous organization. It is rarely that children in whom these two functions are normally accomplished do not become able-bodied men, and, per contra, those in whom they are troubled, irregular, and beset with all sorts of complications, may

be considered as threatened with feebleness and a short life. But, these two processes of organic evolution demand study, not merely as indices of the sort of constitution and of the degree of health: dentition and growth are also the causes of indisposition and even serious diseases; mothers should therefore attentively watch these phases of development, and be well grounded in the part of vigilance and solicitude which is thereby imposed upon them.

Dentition and growth are always associated in their workings, and can be separated only by a pure mental abstraction; but this is indispensable to a clear description, and I shall employ it with the reservation above given.

I.

Dentition, considered as an organic process, occupies not less than from twenty-four to twenty-six years; that is to say, it is prolonged beyond the period of growth, and covers nearly one-third of our allotted term of life. The germ of the teeth exists four months before birth, it develops imperceptibly during the first seven or eight months of life; at this time the first set appears in successive groups, which succeed each other in a tolerably definite order, up to the age of two years or thirty months. The child then has twenty teeth, and his first dentition is at an end. After a variable period of repose, which scarcely exceeds two years, comes a new process of dentition, which, somewhat unaccountably, has escaped the attention of most physicians, a process which ends in the eruption of the four anterior molars, and brings the number of the teeth up to twenty-four. I am inclined to call these the *fifth-year teeth.* Between the sixth and seventh years, the considerable process begins which ac-

complishes the replacement of the provisional teeth and the eruption of the four middle molars, and is not ended before the age of twelve or fourteen years. The last dentition occurs at an age varying between eighteen and twenty-five years; it completes the set by the appearance of the four posterior molars, or wisdom teeth.

Dentition, then, really embraces the following steps:

(1) *First dentition*, or *milk teeth.*—It begins at from five to eight months of age, ends between two years and two years and a half, and is composed of twenty teeth, which *ordinarily* appear in the following order of succession:

d—The four anterior molars.

e—The four canines.

f—The four posterior molars.

(2) *Second dentition*, or *fifth-year teeth.*—This commences between the ages of four and a half and five and a half years; it includes but four teeth, two in each jaw —the four anterior [permanent] molars.

(2) *Second dentition*, or *fifth-year teeth.*—This commences between the ages of four and a half and five and a half years; it includes but four teeth, two in each jaw —the four anterior molars.

(3) *Third*, or *seventh-year dentition.*—This begins at six or seven years, and ends at fourteen or fifteen years. During its course, the first, or milk teeth, are replaced, in an order too variable to be usefully indicated here. The fifth-year teeth persist; the four middle molars appear, and the set is increased to twenty-eight in number.

(4) *Fourth dentition*, or *wisdom teeth.*—This begins at from eighteen to twenty-five years, sometimes even later; the four wisdom teeth which it includes complete the set of thirty-two teeth: the dental system is then perfected.

The teeth always make their appearance in *groups*, a circumstance important to know, for between them longer or shorter intervals of rest occur. Thus it happens that between the eruption of the anterior molars and that of the canines, there is an interval of several months in the first dentition, which is an exceedingly favorable time for weaning. Mothers should know this fact, and, when possible, weaning should be deferred until the child has twelve teeth. This rule is infinitely better than any founded on age. Forced weaning, in conjunction with dentition, leads to disorders of the digestive passages; it will, therefore, be readily understood that it is inopportune, or rather, really dangerous to begin weaning during a teething crisis.

I cannot too earnestly call the attention of mothers to the fifth-year dentition. It is almost always disregarded, and, as the eruption of the four front molars sometimes occupies a full year, and is laborious, and often accompanied with serious complications, it is well to be aware of it. I was formerly deceived in this matter, like the generality of people, but not now, and I never omit an examination of the mouth in children past four years of age, who are suffering from malaise or lingering indisposition. I have known vague nervous affections and loss of flesh to be taken for the precursory symptoms of a brain disease, and yet prove to be due simply to this dentition. I even know one case (and others like it must have happened) in which the eruption of these teeth provoked severe convulsions. A direct examination will eliminate any ground for error.

When dentition is not of itself a cause of disease, it yet unsettles the healthy balance of the system, thus favoring accidents of different sorts. Any child getting teeth (especially in cities) is a patient, or at least an invalid, and, in either case, needs attention.

Teeth are capable of anything, like Orosmane in the tragedy, and the most curious and the most serious accidents may be imputed to them; but they are overloaded with charges, and may justly be included in the same category with wind, worms, and humors, those pillars of the temple which domestic medicine rears to prejudice and routine, and concerning which I have freely expressed myself already. The number of infantile diseases falsely imputed to the teeth is incalculable, and, in the way of loss of time and useless medication, very serious mischief results therefrom. It is necessary to examine, or rather to make others examine, the matter more closely. The teeth may cause children to lose flesh, may make them cough, may provoke diarrhœa, or may lead to convulsions; but all these accidents, apparently of a uniform character, may arise from totally different causes, and the difficulty of the physician's task, as well as the necessity for his intervention, lies in these delicate distinctions. Mothers should not console themselves with imputing a disease to the teeth; moreover, supposing the teeth to be the cause of these accidents, let not a deceitful sense of security be cherished; persons die simply and solely from the immediate or consecutive effects of dentition, and where skill sometimes fails, ignorance can afford no real security.

Remedies for the teeth are one of the war-horses of domestic medicine: time and money are spent on them, and the physician is called too late. There are remedies to stop the pain, to prevent convulsions, and to hasten the eruption of tardy teeth. One of these days there will be put upon the market a guano syrup to stimulate this particular sort of vegetation, and it will surely find purchasers. Had Molière been a physician, what material for his wit would have been furnished in the credulity of

patients! The best teething-syrup, when things go well, is a coral well selected and aided by friction of the gums with the finger, and, when anything unusual occurs, recourse to the physician.

I have remarked above upon the fatal prejudice of allowing diarrhœa to be indefinitely protracted in children suffering from a crisis of dentition; and need not return to the point.

As for the fever, emaciation, cough, etc., dependent on an eruption of teeth, they are such important symptoms, that the child should receive immediate attention. If the teeth prove to be the cause, we endeavor to keep these complications within bounds; if they do not, we seek elsewhere.

I need not allude here to the management of dentition from the point of view of the regularity of arrangement of the teeth;* not that I undervalue that aspect of the subject, but mothers (and without any urging) attend to it with a zeal and vigilance which exceed all injunctions. I understand it, and do not despise it; but I wish that health could occupy their attention to an equal extent with beauty. Why were not all the essential parts of our economy placed externally, exposed to view? What excellent hygienic attention would then be bestowed upon them, and without any urging!

II.

The period of growth in animals varies according to the species, and Buffon, and after him Flourens, have ingeniously established the relation of this period with the duration of life. In man, growth is not at an end until

* See *Avis aux mères sur la santé et l'éducation physique de leurs filles.*

about the age of from twenty to twenty-two years, but development and stature are accomplished in a different manner in different individuals, and, just as each child cuts his teeth in an order somewhat peculiar to himself, so also he grows after his own fashion, and there is no established rule in the matter. Yet the study of the phenomena of growth is exceedingly important. They furnish an explanation of certain family peculiarities in disease, which could not otherwise be understood, and point out the necessity of particular hygienic rules.

Whenever precise data can be substituted for uncertainties, we should take pains to do so, especially as the opportunities for such pieces of good fortune are rare. I have said above, that children should live somewhat like Sanctorius, in a balance; I will add that we should watch their growth, measure in hand. In many families this is done, less perhaps in the interest of hygiene than simply for maternal satisfaction; and the door-posts are scored with cross-lines, with the dates, showing both the successive measurements and the order in which the teeth appeared. It is an excellent precaution, and, were it taken regularly and accurately in all families, a comparison of all these observations would furnish the means of formularizing the laws of growth at different ages.

The only data possessed by science in regard to this point were furnished by M. Quetelet, more than thirty years ago. This savant prepared a table showing the progress of growth in the two sexes, from birth to the completion of the process.

On analyzing this table, we see, in the first place, that growth progresses differently in the two sexes; girls being generally more precocious in this respect. During the first year after birth, the growth amounts to 19.8 cent. [about seven and a half inches], that being the time of its

greatest activity. From the age of nineteen to that of twenty years, it is only four millimètres [about one-fifth of an inch]; that being the time of its least activity. From the age of three to that of four years, growth slackens, being only 3 c., 7 [about an inch and a half]. From four to five years, it rises to 5 c., 6 [about two and a quarter inches], and maintains this rate until the age of seven. From seven to eight, it reaches 6 c., 3 [about two and a half inches]. From eight to twelve years, it is maintained pretty uniformly at 5 centimètres [nearly two inches] annually. From twelve to thirteen years, it is 4 c., 7 [about one and eight-tenths inch]. From thirteen to fourteen years, it reaches 5 c., 8 [about two and a quarter inches]; at fifteen years, it is 6 centimètres [about two and one-third inches]. From fifteen to sixteen years, it is 5 c., 1 [about two inches]. From sixteen to seventeen years, it is 5 centimètres [nearly two inches], and after this time it rapidly diminishes.

The most active periods of growth, then, are:

(1) From birth to 1 year of age.
(2) " the 1st to the 2d year of age.
(3) " " 2d " 3d " " "
(4) " " 7th " 8th " " "
(5) " "14th " 15th " " "
(6) " " 5th " 6th " " "
(7) " " 9th " 10th " " "
(8) " "13th " 14th " " "

The less active periods are:

(1) From the 19th to the 20th year.
(2) " " 20th " termination of growth.
(3) " " 18th " 19th year.
(4) " " 17th " 18th "
(5) " " 3d " 4th "
(6) " " 16th " 17th "
(7) " " 12th " 13th "

These figures are interesting, and it is *probable* that they represent the usual progress of growth; but they need to be verified by new investigations. A hundred mothers who should constitute themselves statisticians upon this point, could furnish, without any doubt, the materials for firmly established rules. Let them do with precision and regularity what they do every day as a matter of curiosity, and science will profit thereby.

This is far from being a matter of mere vain curiosity. If we reflect upon the profound disturbances of health which growth may produce by the opportunities which it offers to the exciting or predisposing causes of disease, we shall readily understand that at the most active periods of growth, care and precautionary measures should be redoubled; more especially since increased rapidity of growth often coincides with the physiological crises (such as dentition and puberty), or with morbid crises, and directly increases their danger. Mothers often measure their children with pride, and rejoice to see them grow in stature, outstripping their comrades of the same age; they ought rather to feel anxiety at this impetuous development, which is never devoid of danger.

The manner in which growth is accomplished is an excellent measure of the strength of a child's constitution, and of the wisdom of the hygiene to which he is subjected. It is very rarely that a growth by strides announces a good constitution, or presages good health. Progressive increase of stature is an excellent sign; retarded or too hasty growth, or growth considerably retarded, after having been too hasty, bodes no good, independently of the dangers which, of itself, it calls up. It is difficult for perfect harmony to be maintained between the various organs in such cases: some growing immoderately, others suffering arrest and serious danger of failing to attain their due proportions.

There are many children in whom fever is inseparable from growth. It is lighted up in them, and its cause is sought for in vain, until presently it is recognized on measurement. If this fever depends upon a short period of growth, it is transitory; it becomes persistent, if the child continues to grow excessively. In the first case, the fever lasts from twenty-four to forty-eight hours, the child falls away perceptibly, but recovery immediately follows; in the second case, there are irregular slight accessions, very obstinate; which are always attributed to some other cause, and which lead to a more or less judicious dosing. The appetite is often exaggerated; the eyes show a dark coloration; there is pallor, indisposition to exertion, noticeable loss of flesh, a tendency to curvature of the bones, and often, also, a dry and obstinate cough, giving rise to anxiety in regard to the condition of the chest. At these epochs of rapid growth, the heart becomes very excitable, beating forcibly, and, if such children are allowed full liberty to run about and join in active play, they may contract the germ of a disease of the heart. In this condition, there is also a tendency to softening of the bones, and deviations from symmetry are particularly prone to arise, chiefly in girls, and at the approach of puberty.

It is asked, whether there are diseases of growth. We have already answered this question, but we ought to warn the reader of the tendency of domestic medicine to exaggerate the importance of this physiological cause. According to an opinion high in favor, worms, teeth, and growth determine the whole medical treatment of childhood. Their influence is important, but it is magnified. This fact, we have said, involves actual danger: that, namely, of disregarding other causes of disease, and consequently pursuing a false course.

A child, while growing, is at the same time subject to the ordinary drain of mere maintenance; its expenditure of force should, therefore, be moderated, and its resources increased. The first object is attained by curtailing muscular activity; the infliction of study upon a brain already over-excited by the important organic work of presiding over growth embarrasses it, and leads to no good; and very active kinds of exercise, such as running, prolonged walks, and gymnastics, should be replaced by the passive exercise of the carriage, by prolonged periods of sleep, and by increased care as to purity; since during exaggerated growth there is a condition of nervous excitation highly favorable to the acquirement of pernicious habits. As regards the increase of resources, it may be provided for by good and substantial food, aiming at the nutritive rather than the dainty, and by favoring full digestion and assimilation by free exposure to air and sunshine. A sojourn in the country, and the use of cod-liver oil, are precious resources, to be made use of at the same time, when possible. Again, it should be remembered that, at this time, particular care should be exercised over the child's habitual attitudes. The general feebleness and softened condition of the bones may become the starting-point of deplorable curvatures and alterations of form.

I might talk long upon this subject. Certainly there are many children predisposed, by the sanitary condition of their parents, or by their own constitution, to these painful deformities; but a well-ordered hygienic management during growth; an assiduous watchfulness over their attitudes during exertion, in their games and exercises; a good regimen, gymnastics, the habit of using both hands alike—these would diminish the number of those unfortunate Pariahs of beauty, who, doomed to a pitiful existence, and unfitted for public life, find in the

proverbial acuteness of their intellect but a sorry compensation for their physical deficiency.

I have spoken of ambidexterity, or the equal and indifferent use of the two hands, and I will say a word further in regard to it, although this book does not treat of hygiene, of so great importance does the subject appear to me, and instruction so necessary.

Physicians and philosophers have long discussed the question, whether the right side of the body is really originally superior to the left, and they have generally arrived at an affirmative conclusion. Yet, left-handed persons are by no means rare, and every one knows how easily education enables them to manifest with the left hand the ordinary superiority of the right. Neither can it be denied that the left side is less trained and less under control than the right side; but education *can* correct this shortcoming, and I affirm that it *ought* to do so. Ambidexterity, or the indifferent use of the two hands, is indeed a valuable accomplishment, in very many circumstances, and mothers ought to cultivate it in their children; they will succeed in it with girls as well as with boys, notwithstanding the easily controvertible aphorism of Hippocrates, who declares that women are not fitted to become ambidextrous. There are manifold advantages attaching to the uniform training of the two hands.

In the first place, it determines perfect erectness of form. If the right side be used exclusively, and especially in laborious occupations, the trunk tends towards the opposite side, and the vertebral column bows out towards the right; it will readily be understood that, in delicate, lymphatic young girls, disposed to lateral curvature of the spine, the exclusive exercise of the right side involves a sort of predisposition to danger.

Symmetry of form is no less threatened: the whole left side undergoes a remarkable augmentation of volume; the muscles, given over to comparative inaction, decrease in size, and they stand out in less relief; and the bones themselves, being less highly nourished, are less voluminous than those of the opposite side. This disproportion involves the whole left side, but it becomes more striking upon comparison of the two hands, and particularly certain muscular masses, such, for instance, as that situated between the thumb and the forefinger, especially in persons who write a good deal. These muscles stand out in bold relief on the right side, while, on the left, they are flabby and sensibly flatter.

Apart from these inconveniences, the ordinary supremacy of one arm causes the other to be maintained somewhat in the condition of a half-paralyzed stump, serving but little better than a well-made artificial limb. Moreover, the right arm may be lost, and it is prudent to cultivate a trained successor. I know persons whose left side has become so enfeebled, that it would be impossible for them to hang suspended by that hand, even for a second. Besides, nature did not give us two hands merely for the sake of purposeless symmetry, and it would be no more absurd to keep one eye closed than to condemn the left hand to idleness. Franklin, a practical philosopher who carried good sense to the extent of genius, has presented this question in a singularly perspicuous light. Mothers will thank me for the privilege of reading his appeal, as elegant as it is ingenious. The left hand, humiliated at its neglect, delivers itself of a petition in the following terms:

"I address myself to all the friends of youth, and conjure them to direct their compassionate regards to my unhappy fate, in order to remove the prejudices of which

I am a victim. There are twin sisters of us; and the two eyes of man do not more resemble, nor are capable of being upon better terms with each other, than my sister and myself, were it not for the partiality of our parents, who make the most injurious distinctions between us. From my infancy, I have been led to consider my sister as a being of a more elevated rank. I was suffered to grow up without the least instruction, while nothing was spared in her education. She had masters to teach her writing, drawing, music, and other accomplishments; but if by chance I touched a pencil, a pen, or a needle, I was bitterly rebuked; and more than once I have been beaten for being awkward, and wanting a graceful manner. It is true, my sister associated me with her upon some occasions; but she always made a point of taking the lead, calling upon me only from necessity, or to figure by her side.

"But conceive not, Sirs, that my complaints are instituted merely by vanity. No; my uneasiness is occasioned by an object much more serious. It is the practice in our family, that the whole business of providing for its subsistence falls upon my sister and myself. If any indisposition should attack my sister,—and I mention it in confidence upon this occasion, that she is subject to the gout, the rheumatism, and cramp, without making mention of other accidents,—what would be the fate of our poor family? Must not the regret of our parents be excessive, at having placed so great a difference between sisters who are so perfectly equal? Alas! we must perish from distress; for it would not be in my power even to scrawl a suppliant petition for relief, having been obliged to employ the hand of another in transcribing the request which I have now the honor to prefer to you.

"Condescend, Sirs, to make my parents sensible of the

injustice of an exclusive tenderness, and of the necessity of distributing their care and affection among all their children equally.

"I am, with profound respect, Sirs,

"Your obedient servant,

"THE LEFT HAND."

(*Franklin's Works*, vol. ii., p. 183.)

I adjure mothers not to pronounce hasty judgment upon this petition. It is indeed with real regret that I daily see them commit a grievous wrong by condemning their children's left hands to inaction, and by initiating, by lessons on the style of holding the knife and spoon, a monopoly which the needle and the pen will subsequently confirm. One can, if one chooses, be *left-handed without awkwardness*. The piano (let us at least do it that justice) has the advantage of equalizing the action of the two hands, and, consequently, of causing a certain measure of ambidexterity. Well-directed gymnastics may also contribute to this result, much more desirable than is commonly believed.

We see, then, that growth and dentition need attentive watching: it is wrong to attribute to them all the derangements of health which occur during the growth or dentition of a child; but they are critical processes, during which the preservation of health demands active vigilance and skilful management.

CHAPTER IX.

MATERNAL OBSERVATION.

Plus les yeux ont vu, plus l'esprit voit aussi.
(G. ZIMMERMANN, *de l'Expérience*, t. ii., p. 93.)
La mère constate, le médecin interprète.

WHILE it is true that mothers ought not to meddle with medication, it is at the same time very useful for them to devote themselves to the thorough observation of their sick children, in order that they may give the physician an account of all that happens between his visits. This is a measure of great importance, and children would be better cared for, were its value better understood.

But, just as it is foolish and dangerous to put off calling the physician until the disease has effected a lodgment, so it is necessary that the mother's observation should begin during the first days of life, and continue uninterruptedly, so that she may possess a sort of sanitary record-book for each of her children, which she need only open for the physician's assistance when occasion calls him.

How much simpler would be our task, and how much more efficient our services, had we some such resource! But it is evident that memory would be insufficient for the registration of so many details; they should be written down, and I expressly recommend this proceeding to mothers. They have their book of accounts and expenses, which they keep with a regularity which does them

honor; why should they not set down sanitary occurrences and developmental events in their actual order: here the period of the eruption of the teeth, there an attack of measles, in another place a cold, a varicella, etc.? The physician might dictate the terms of these annotations. No theories, no hypotheses; but precise facts, with their dates, nothing more. But it is necessary to the usefulness of these observations, that they should be methodically taken, and a set form is indispensable.

I would propose the following:

(1) Date of birth;

(2) The mode of lactation, and the particular circumstances which influenced it;

(3) The diseases of lactation, with their dates, their duration, some indication of their severity, and the measures successfully employed against them;

(4) The first dentition.—The time of appearance of the incisors, of the eye (or canine) teeth, of the first large teeth; the various accidents of dentition (convulsions, diarrhœa, different eruptions, ophthalmic affections); the date of the appearance of the twentieth tooth;

(5) The date of weaning.—The ease with which it was accomplished, or the accidents with which it was complicated (diarrhœa, loss of flesh, marasmus);

(6) Walking.—At what age did it become possible? Was it advanced, retarded, or interrupted?

(7) Vaccination.—At what age, and under what circumstances? Were the pocks regular in their progress?

(8) The intermediary dentition, or eruption of the first four molars. The concomitant incidents;

(9) The second (or seventh-year) dentition. The peculiarities which it presented;

(10) The eruptive fevers (measles, scarlet fever, varioloid, chicken-pox, etc.);

(11) Growth.—Measure every three months, and note the manner in which it is done. Precocious, tardy, or irregular growth. Accidents connected with growth;

(12) Accidental diseases, ordinary attacks of indisposition, etc., etc.

This schedule may be varied, but its essential elements should never be omitted. It will be seen that it does not include any difficult piece of observation in hygiene or disease; a word once in three or four months, and the notes are up to date, capable of furnishing the physician with useful data, and of profiting the child during his whole life. It is rare indeed that the march of sanitary events in early life is not subsequently reproduced, with the necessary modifications, and these data could be made useful at every age.

What an amount of security there may be in five or six pages written during a period of fifteen years! Moreover, many families would have the good fortune of those peoples whose history is short, and the task would be still more simplified. I cannot too earnestly counsel mothers to keep this journal scrupulously; it is the sole means of establishing and preserving those sanitary traditions without which medicine is practised somewhat at random, or at least upon necessarily incomplete data. In addition, very valuable light may thus at any time be shed upon the interests of other members of the same family.

Suppose these notes to have been well kept, and that an attack of disease furnishes occasion to make use of them. They will inform the physician concerning past attacks of which he was unaware, or the remembrance of which had escaped him. But the mother will have accomplished only half her task, if she does not herself know how to observe her child during the course of a disease, and thus supplement the observations of the attend-

ing physician. Here again a few precise details will not be superfluous.

As a matter of course, maternal observation can take cognizance only of external, apparent signs, and it should register them simply as they are, without seeking to estimate their significance or their importance. The part of a *registering apparatus* may seem humble, but it is useful only in proportion as it preserves this character. In short, it has nothing to do with science, but simply with aiding the physician to save his patient, by filling up the breaks which the intervals between his visits leave in a work of observation which, to be beyond risk of error, should be continuous.

And, first of all, the mother should learn to examine and count the pulse. The index and middle fingers of her right hand, applied upon the fore and outer parts of the forearm, immediately above the fold which separates it from the palm of the hand, will encounter a solid feel, and will be lifted up in a rhythmical manner by an artery. These pulsations are to be counted, and their number in a minute registered. A quarter-minute glass, or a watch with a second-hand, will serve to measure the time. In infants, this examination cannot usually be prolonged for a half-minute or full minute; any refractoriness or unexpected movement would interrupt the observation, and it would have to be done over again. If one lacks skill, it is better to have the watch held by a third person, who is to give a signal at the commencement and termination of the time, as thus the attention is more easily concentrated upon the pulse under observation. It is well to begin again after a short interval, in order to guard against causes of error especially met with in children, whose pulse is naturally very frequent. As considerable difference exists among children in regard to the rapidity of

the pulse during health, it will be well to inform the physician of its ordinary rate, lest he take for a sign of disease what is only a rapidity peculiar to the individual. It is proper to repeat this examination at least every hour, or oftener if unexpected modifications supervene in the general condition of the little patient.

The number of pulsations in a minute is the feature most easily observed, and the most valuable. Up to the age of six years, it beats over a hundred a minute in the healthy child; after this age, it tends to approach the rate of the pulse in adults, *i. e.*, 60 to 65. But this observation does not involve a scientific study of the pulse, but simply aims to furnish the physician with the naked facts, which he will turn to account, and know how to interpret correctly.

The mother may, without trenching upon the domain of medicine, go beyond this examination. She should note the regularity or irregularity of the pulse.

In a regular pulse, the intervals between the beats are perceived to be equal during the whole time of observation (a half-minute, for example). If it be regular, note the regularity; if it be irregular, specify the kind of irregularity. For instance, one pulsation in every four or five may be wanting, or one in every thirty or forty; one series of pulsations with regular intervals may be succeeded by another series in which the intervals change every instant. All this should be noted. So also the pulse may be hard or vibrating, raising the finger forcibly, or soft and easily compressed; it may be full or small. There are other characters which it may offer, but they are more rare, and apparent only to medical observation.

Remember the following particulars:

(1) The pulse of a sleeping child is considerably less

frequent than during the waking state; at the moment of waking it becomes unusually rapid, and the lapse of a little time should be allowed before counting it.

2. The slightest emotion, the least impression occurring even a little while before, is sufficient to modify the pulse; if the presence of one of these disturbing causes be suspected, the trial must be renewed two or three times in order to avoid all error.

3. If the forearm be forcibly extended upon the arm, the pulse may completely disappear. The most favorable position is that in which the forearm forms about a right angle with the arm, and the hand, hanging loosely, is in such a position that the thumb looks downward and inward.

4. There may be a natural inequality between the pulses of the two sides, and it is always well to make a comparative examination of the two.

5. If the pulse be wanting at the wrist, it may be sought for in the groin, or at the temple, where the artery may sometimes be seen beating. Finally, we may often count a child's pulse without touching him, and consequently without exciting him, by examining the neck while the head is resting upon one cheek: if the child be lean, the artery is to be seen beating strongly, and its pulsations are sufficiently visible to be counted; but it should be remarked that the eye counts less accurately than the finger, and often perceives only vague undulations where the touch would appreciate the pulsations to a nicety.

The pulse being now counted and noted, the mother is not on that account any the more a physician; but, by means of this precaution, she is enabled to furnish precise numerical facts in place of the vague information which leads to nothing useful.

The *rhythm of the respiration*, likewise, should be examined in the interval between two visits. The classic hour-glass comes in here again. It is more difficult to count the breathing than the pulse; but a little artifice will accomplish it. When possible, this examination should be made while the child is asleep; his respiration is extremely sensitive to external influences, a mere nothing affecting it; a movement, a slight sound, or a desire, changes it radically. If the outspread hand can be glided under the bed coverings, and applied to the chest or the abdomen, it will be raised at each entrance of air, and lowered at each expulsion, and these two movements, this aerial flux and reflux, make up respiration. In order to place the hand upon the point of greatest motion, one need only remember that little boys, especially after infancy, breathe principally with the lower part of the chest and with the belly, little girls with the upper part of the chest. I have often found it convenient to make a sort of little clock of that portion of the dress which covers the upper part of the chest, the outline of which is perceptibly separate from the rest, and the rhythmical ascent of which at each entrance of air is perfectly appreciable, and may easily be counted. Finally, if touch and sight both fail, we may still resort to the ear; the sound of air entering the chest may be heard at some distance, and so the breathing may be counted. At the same time we notice whether it is soft or noisy, and the presence or absence of those wheezings and rattlings with which the chest abounds in certain of the diseases of children.

It is advisable also, especially in diseases of the chest or the throat, to note the peculiarities of the cough and of the voice.

Cough manifests itself in isolated efforts, or in convulsive kinks. In the first instance, it is only necessary to

know if it has been frequent or has returned at long intervals; in the second, it is convenient to count the kinks. This is indispensable in whooping-cough. Trousseau advised mothers to provide themselves with a card and a pin, and to make a pinhole in the card for every kink, by day and by night. The card is changed every twenty-four hours; the date is inscribed on each one, and thus we have a scale of the increase or decrease of the whooping-cough, which may be profitably consulted as a measure of the effect produced by the remedies employed. The *dryness* or *looseness* of the cough, and its *hoarseness*, are also characters to be recorded, and which may throw a very valuable light upon the nature of the disease giving rise to the cough.

As regards the *voice*, its nasal character, indicative of swelling of the tonsils and back part of the throat, or of obliteration of the nasal passages, its hoarseness, its degree of clearness, are also indications which may be usefully observed.

Fever may doubtless be to a great extent estimated from the frequency and hardness of the pulse; but a high and sustained heat of the skin, and flushing of the face, complete the signs.

To appreciate changes of *temperature*, the sense of touch is universally made use of; the thermometer serves a good purpose, but it involves technical knowledge, and, although it may be very easy to place a thermometer in the axilla, and to read off the degree reached by the column of mercury, I do not recommend to mothers a practice which would seem to exceed their ability, and which would complicate their duties. Moreover, between the normal temperature, which is 37° centigrade [98.6° Fahrenheit], and the highest degree of fever heat in children, 42° cent. [107.6° Fahr.], is but five [nine] de-

grees, and the hand perceives the difference between normal heat and that of fever with sufficient delicacy. It is important only that there should not be too marked a disparity of temperature between the hand which explores and the skin to which it is applied. It is useful also to observe, at the same time, the heat of different parts of the body, the head, chest, and limbs, and carefully to note their differences; they are often useful indications. The hand has the advantage over the thermometer of being a feeling instrument, and of conveying valuable information in regard to the dryness or humidity of the skin, its hardness or suppleness, the benign or biting character of the heat, etc.*

The *coloration* of the skin also needs to be carefully studied; only that of the uncovered parts need be examined, unless the case be one of an eruptive fever. As regards the countenance, the redness of the cheeks, or of one or the other of them, may not be without significance.

The attention of mothers is spontaneously turned towards *sleep*, and their instinct makes them appreciate the importance of the signs connected therewith. It is proper to note the number of hours of sleep, its calm or agitated character, the dreams which occur in its course, the movements of the mouth, the cries, the changes of position, the grinding of the teeth, the variations of expression, which may occur during sleep. Is the sleep continuous or interrupted?—does it lead to moisture or to redness of the face?—are the pulse and the breathing modi-

* I venture to differ with the author in his estimate of the comparative value of the thermometer and the hand in the appreciation of the bodily temperature. The former is much the more reliable and precise, and a physician can in a few moments teach almost any person how to apply it.—F. P. F.

fied under its influence, etc. ?—are questions which the physician may put to the mother, and which she should hold herself ready to answer.

In children, *attitude* is a very varying means of expression, and one which, in a state of health, needs to be carefully studied. Physicians deduce very valuable indications from the position in which children lie in bed, accordingly as they lie on the back or on one or the other side, as they stretch themselves out or fold themselves up; but they usually judge of them only from the information given them. The return to normal attitudes is sagaciously seized upon by mothers, and considered by them, not without reason, as an indication of progress towards health. This does not apply to the resumption of certain habits, such as sucking the tongue, or thrusting one or more fingers into the mouth, which has no particularly favorable significance, and which, therefore, need not be noted.

Concerning the *physiognomy* of children and its changes, there is nothing to be said; the mother is endowed with a sort of second sight for reading in this versatile mirror; a smile, a line, or a fleeting expression speaks to her in a singularly expressive language, and the physician's observation sinks into insignificance in comparison with the mother's intuition. It is her privilege to seize upon these rapidly-vanishing phenomena, and to interpret them aright. She need only be told of the favorable omen drawn from tears. Physicians devoted to the management of children's diseases know how much is to be feared for a child who cries without shedding tears and the mucous membrane of whose mouth and nose remains dry. The presence or absence of this sign, concerning which we have already spoken, is therefore to be noted.

As to the condition of the *strength*, that is a matter for professional observation; indeed there is little variation in it between two visits, and, in the progress of acute diseases, the mother need not concern herself in regard to it. In chronic diseases, on the other hand, it is well to inquire about it, and the greater or less ease with which children raise objects of known weight, possesses a truly practical interest. They are the common, but too much neglected, dynamometers.

I have already said that the physical education of a child should be conducted with the rule and balance in hand. But there are things so important, that their repetition cannot be avoided. Unfortunately, this practice, so simple, and at the same time so useful, finds a hindrance in that most absurd and very wide-spread superstition, that the act of weighing a child works some subtle evil influence upon his health. It is incumbent upon mothers belonging to the intelligent classes to combat this ridiculous notion.

The mother's part, as an observer, would be incomplete if she did not attentively examine her children at different hours of the day, so as to note carefully the modifications presented by their condition from one moment to another. The physician may make good use of such information, especially in those diseases showing periodical febrile or nervous exacerbations. Paroxysms, therefore, should be carefully noted. Whatever occurs after eating, or after the administration of medicines, should also be attentively observed, in order that an account of it may be given. Mothers should also preserve, in order to show them to the physician, certain secretions or products evacuated from the body, as they may be just the data which he requires for a decisive judgment.

If *vomiting* takes place, the vomited matters should be

carefully preserved free from all admixture, in order that the physician may judge of their nature. How often, however, are these descriptions contradicted by ocular examination!

The same precaution is still more indispensable in the matter of the *intestinal evacuations*. These cannot be safely interpreted unless they are seen, and this sort of ultimate analysis of digestion, a prime necessity in diseases of the intestinal tube, is of interest in all cases. The physician's directions will include this, and mothers know how much importance he attaches to such an examination.

It is to be regretted that the *urine* is less commonly examined. Its inspection is of the very highest practical importance. That passed during the night should be kept separate from that passed during the day, and it is well to fill a glass with it that the physician may the better judge of its appearance, transparency, etc., and, if necessary, submit it to certain analytical manipulations. It is also a matter of consequence to ascertain exactly the quantity of water passed by the little patient in the course of twenty-four hours. It would be a refinement, bordering on the ridiculous, to resort to the burette; but I will mention a very simple and rapid method of accomplishing the purpose. Take a tall glass about a pint of water into the vessel, and plunge a little stick to the bottom; mark a notch at the level of the surface of the water; add another half-pint, and make an additional notch in the same manner. For young infants, use a quarter of a pint as the measure. To ascertain the quantity of urine passed in twenty-four hours, plunge the stick to the bottom, and note the point reached by the surface of the fluid.

The preservation of *expectorated matters* is very im-

portant: without this proceeding, it would, indeed, sometimes be impossible to recognize the disease; in all cases, it is a means of information by no means to be neglected.

Infants do not expectorate, they swallow the mucous secretion from the lungs, so that its nature can be examined only by inspecting the matter cast off from the stomach by vomiting. I should say, however, that mothers may teach their children to expectorate at an early age, three or four years, for instance, by watching for an accession of cough, inclining the head forward, and opening the mouth, supplementing these measures, if necessary, by the movements or sounds of expectoration, which will induce in them an imitative action. This is no trivial matter. Besides the advantage of viewing the expectorated material, it is better that it should be in a handkerchief than in the stomach; it resists the digestive action of this organ, while fatiguing it, and traverses the intestinal canal, to present itself in the stools, the characters of which it sometimes masks, as is seen in certain cases of catarrh with very abundant expectoration.

Finally, the *blood* of hæmorrhages should, to as great an extent as possible, be preserved, particularly in bleeding from the nose or from leech-bites. Nothing is more common than an inordinate estimate of the quantity of blood lost by patients. The physician, who is aware of the enormous coloring power of a small quantity of blood in a liquid, and how little blood is required to saturate and stain a large amount of linen, demands an actual examination in order to a correct appreciation.

To carry out thoroughly the observations which I have mentioned, and to add to them others relating to chance occurrences, and to the manner in which the medicines prescribed have been taken, and how they have been borne,—such is the mother's part: a function of

great assistance to the child, and very advantageous to the physician, who appreciates it all the more from the fact of encountering it so rarely, he usually finding one piece of useful information hidden among a thousand superfluities, embarrassing rather than guiding his observation.

Dr. West states that, in his private practice, he requires notes to be taken by those in charge, in the intervals between his visits. They are written on sheets of paper ruled in five columns: one for food, one for medicines, a third for sleep, a fourth for the evacuations, and a fifth for special remarks. He attributes to this excellent habit the double advantage of furnishing information to the physician, and of compelling nurses to more attentive observation, and to more scrupulous care. (*How to Nurse Sick Children;* London, 1868.)

Would that things were thus ordered in every family. Why could not the household book of memoranda include some forms indicating the sort of facts to be observed, and reported to the physician? * * * * * * *

CHAPTER X.

A SICK CHILD'S CHAMBER.

Chaque chose dans la maison doit avoir son lieu et son temps.
W. PENN.

Faire aller son ménage, avoir l'œil sur ses gens. . . .
MOLIÈRE, *les Femmes savantes*, Acte II., sc. VII.

To arrange a sick-room properly, to provide intelligently for every need, to maintain order and cleanliness in the midst of all disturbing conditions—constitutes an entire art, and a very useful one. To express this assemblage of details relating to domestic order and smoothness, which should be the ideal of every accomplished woman, the English have a word whose equivalent I am sorry not to find in our language: that of *management;* it very well expresses that combination of order, economy, and regularity—in a word, domestic *respectability*, which is at the same time the prosperity of a house and the glory of its mistress.

In medicine, little things lead to great results, and we feel justified, by their importance, in the discussion we are going to enter upon in regard to matters of detail, however humble and minute.

To maintain perfect order and scrupulous neatness in a child's sick-room; to renew and purify the air; to prevent noise; to diffuse light and warmth in a manner previously settled upon, with a view to the accomplishment of a definite end—such are the different aspects presented by the question. We will consider them separately.

the child's bed surrounded with a thousand incumbrances; too little air and too little space; a quarter of an hour consumed in finding the most ordinary article, a second in losing it again; the appearance of a field of battle; the perfect picture of chaos; the sad features of disease darkened by the tints of neglect. The inimitable pen of Dickens has portrayed, in *Bleak House*, a house, or rather a Babel of this sort. Mistress Jellyby, wholly given over to the concerns of an absorbing negrophily, to which she charitably sacrifices her family, is the exaggerated, but all the more life-like, type of those women who fling loose their reins of domestic authority, busy themselves with everything but their proper occupation there, and, unfit to direct it under the best of circumstances, become still more so whenever the cares of an infirmary are added to ordinary household duties. Disorder then attains its climax, and nothing gets on.

First of all, nothing should be left in the child's room except what he will have need of; anything more would complicate the attendance, would take up space, and would demand care which would disquiet him without doing him any good.

A table covered with a white napkin is placed in one corner of the room—to hold the drinks, utensils, medicines, etc., of which the child may have need. Dressing materials, such as those used for poultices and sinapisms, are to be conveniently placed. Fresh water, a supply of sugar, orange-flower water, and spare cups, are all to be ranged in order; in case of exigency, preparation has been made; there will be neither disorder, nor improvidence, nor omission, to favor it. It is pleasant to the physician to enter a sick-room thus ordered; he feels that he is not fighting the battle alone, but that he will be seconded.

Cleanliness is the daughter of order, and they are always seen together. If it is the condition of maintaining health, it is still more that of regaining it. I shall speak here only of the cleanliness of the chamber; that of the bed and of the patient's person demand no less assiduous attention, but they will be considered presently. A well-ordered sick-room should be without odor. By changing the air as fully as practicable, employing various disinfectants, and allowing none of the evacuations or soiled linen to remain in the room, the requirements for solving the problem will be obtained.

Whenever it is found possible to have two small chambers communicating with each other, and isolated from the remainder of the dwelling, there will be realized the most favorable condition for maintaining purity of air. The patient (and a child can always be transported, either in the arms or in a movable little bed) passes the day in one of these chambers: the communicating door is closed, the windows of the other room are thrown wide open, in which latter room, previously warmed to the proper degree, he is to pass the night. Nothing is more effectual than this arrangement, when it is possible.

But most commonly, only a single room can be appropriated to the little patient, and it must be confessed that the dangers of this isolation are increased by that fear of colds which annually claims more victims than colds themselves. *Aerophobia* is more fatal than *hydrophobia*. Closing the curtains of the patient's bed, and opening the windows at least once or twice a day, when the weather is not too severe, is a very general practice in England; it is beginning to be introduced into our hospitals, but it will have to vanquish many a prejudice before carrying the barriers of domestic medicine. *Air is always salutary, only currents of air are disadvantageous:* nurses, of

whatever grade, should never forget that. Indeed, even in pulmonary diseases, what is to be feared by patients whose bed-coverings reach to the chin, and who have the additional protection of curtains? It is in typhoid fever especially, that this fatal prejudice is pushed to the greatest length, and involves the most lamentable consequences. The air is never renewed, and patients live, or rather die, poisoned with their own emanations.

Both patients and nurses would profit by a change of policy.

You cannot *renew* air by *disinfecting* it, and you cannot *disinfect* it by *deodorizing* it. When you disinfect air, you withdraw from it the odorous organic matters which it contains, or at least you decompose them; but you do not restore to it what it lacks, that is to say, its chemical purity, its oxygen, its life-giving properties; when you take away its odor by masking it with various perfumes, it remains as noxious by what it contains and by what it lacks, as before, and only a deception is the result. This is what happens when you burn sugar, vinegar, or a little benzoin in a room; nothing but the nose is appeased, the lungs gain nothing. The renewal of air by an open window, by the ventilation of a grate fire, or communication with an adjoining chamber through an open door, is the only means of its real purification.

There are numerous *disinfectants, i. e.*, substances which possess the property of decomposing, and at the same time deodorizing organic matters, and within the past few years, science has made very valuable advances in this direction. It is not necessary that mothers should know them all, but they ought to be familiar with the management of the most common one of them—chlorine. A little dry chlorinated lime, kept in a plate, and sprinkled occasionally with strong vinegar, to accelerate the

disengagement of the chlorine, is placed in one corner of the room, and is changed every three or four hours from one place to another; but Labarraque's solution, which can be sprinkled on white fabrics without spotting them, is more convenient. When the room betrays some odor, the floor is to be sprinkled with it, or a handkerchief saturated with it may be hung upon the back of a chair, when chlorine will be continuously evolved in small amount. In some diseases, with particularly fetid secretions, it is even necessary to sprinkle the patient's clothing, provided the smell of chlorine be not disagreeable to him. The night-vessel should always contain a certain quantity of it, and in this way, that repulsive odor, so prejudicial to the patient's welfare, may be overcome. "*A well-kept chamber should never give out an odor.*" To replace a fetid smell by that of caramel or camphor, is not to solve the problem, but only to dodge it. We may apply to the air of a room what Plautus has said in another connection: "*That which has the most agreeable odor, is that which does not smell at all.*"

An important precaution consists in not allowing either flowers (whose possible ill effects are well known), or very odorous medicines, such, for instance, as musk, valerian, assafœtida, etc., to remain in the room. The remnants of medicines should be removed, or, when they have been prescribed to be given by spoonfuls, the phials should be kept within the fire-place, or upon the window-sill of an adjoining room, turned upside down in a glass of water, and should be brought in when wanted. The olfactory sensitiveness of patients is well known: they are excessively annoyed or pleased with odors, and *Bully* negar, so lively, agreeable, and inoffensive in smell, is only perfume which they should be allowed to use. en Cologne water is too powerful, and still more those

complex essences, *sachets*, and *bouquets*, which affect the sense of smell agreeably, but the nervous system unpleasantly. Disease is a serious matter, and will have nothing to do with these vain devices.

Man is, by the necessities of his health and welfare, at war with the aggressive crowd of living beings which envelop him on all sides, and he makes this contest as relentless as it is legitimate. It must be allowed that domestic hygiene is to-day notably better armed against parasites than it was a few years ago. Insecticidal powders, etc., have been very much improved. Whoever gets the worst in this battle, gives proof of his carelessness; he submits to annoyance, and confesses to humiliation. Children's sleep is purchased by unceasing watchfulness in this respect, and those who appreciate its value appreciate also the worth of those means of cleanliness of which we are speaking.

Among the parasites which infest the sick-chamber, there is one whose aggressions rise, in certain countries and certain seasons, to the proportions of a plague: I refer to flies, those harpies of a modern sort, which inflict upon the patient the punishment which the harpies of mythology inflicted upon the blind Phineus, which pollute everything, and whose buzzing and titillation amount to a real pest with patients. Numerous means have been proposed for getting rid of them, but their number alone is enough to show their futility.

Maintaining scrupulous cleanliness, getting rid of all remains of food capable of attracting them, particularly of the saccharine sort, constitutes, perhaps, the best preservative. Arsenical papers, of whatever sort, are dangerous: they may give rise to accidents, and should be avoided. Certain papers, steeped in a concentrated solution of quassia, are harmless to man, but promptly destruc-

tive to the flies. They should of course be preferred to the others. I have seen considerable alarm produced in a family by a child having chewed one of these leaves. There was, however, no untoward result. The bird-lime snares, and especially those very ingenious ones which have been devised within a few years, also have the advantage of not being dangerous. In 1852, M. Stanislas Martin, a pharmacist, proposed soap-water as a snare. Take Marseilles soap; make a strong lather with water, add a little sugar, molasses, or honey, and cover it with a perforated bit of paper. The flies enter the vessel, accumulate there, and are drowned. The Caucasian chamomile, whose insecticidal action is so commonly made use of, kills the flies if sprinkled about a room which is kept shut for ten or fifteen minutes. Possibly it would disperse these parasites, if sprinkled upon the patient's bed, but I have no experience in regard to the matter. The inconvenience which they cause is sufficient to call for the greatest display of ingenuity and perseverance against them.

II.

Tranquillity is an indispensable item in a sick child's room. It is to be had without money, and yet it is very rarely that the physician succeeds in procuring its benefit for his patients. Senseless and spasmodic nursing, with an ill-timed multitude of visitors, generally counteract our directions in this respect.

In acute diseases, especially in children, the sensibility is highly excited, and noises which would be perfectly tolerable in a state of health become then annoying or dangerous. A heavy tread which makes the room shake; a door which creaks or which is carelessly shut; the monotonous sound of a somewhat noisy pendulum; orders

given in a loud voice; the knocking of spoons against a cup or glass; sounds from the street or the adjacent hallways; the rustling of silk: everything, even to the snoring of a watcher, agitates the patient, strains his nerves, and banishes sleep from his eyes. Nervous patients who may read these statements will not think them overdrawn. A woman whose name all sick persons bless, and whose book (*Notes on Nursing, what it is, what it is not*) every mother should be familiar with, Miss Florence Nightingale, has written an eminently practical chapter upon this point, which we translate for the benefit of our readers: they cannot fail to gather from it an idea of the importance of rest to the little patients whom they will have to take charge of:

"Unnecessary noise, or noise that creates an expectation in the mind, is that which hurts a patient. It is rarely the loudness of the noise, the effect upon the organ of the ear itself, which appears to affect the sick. How well a patient will generally bear, *e. g.*, the putting up of a scaffolding close to the house, when he cannot bear the talking, still less the whispering, especially if it be of a familiar voice, outside his door.

"There are certain patients, no doubt, especially where there is slight concussion or other disturbance of the brain, who are affected by mere noise. But intermittent noise, or sudden and sharp noise, in these as in all other cases, affects far more than continuous noise—noise with jar far more than noise without. Of one thing you may be certain, that anything which wakes a patient suddenly out of his sleep will invariably put him into a state of greater excitement, do him more serious, aye, and lasting mischief, than any continuous noise, however loud.

"Never to allow a patient to be waked, intentionally or accidentally, is a *sine quâ non* of all good nursing. If

he is roused out of his first sleep, he is almost certain to have no more sleep. It is a curious but quite intelligible fact that, if a patient is waked after a few hours' instead of a few minutes' sleep, he is much more likely to sleep again. Because pain, like irritability of brain, perpetuates and intensifies itself. If you have gained a respite of either in sleep you have gained more than the mere respite. Both the probability of recurrence and of the same intensity will be diminished: whereas both will be terribly increased by want of sleep. This is the reason why sleep is so all-important. This is the reason why a patient waked in the early part of his sleep loses not only his sleep, but his power to sleep. A healthy person who allows himself to sleep during the day will lose his sleep at night. But it is exactly the reverse with the sick generally; the more they sleep, the better will they be able to sleep.

"I have often been surprised at the thoughtlessness (resulting in cruelty, quite unintentionally) of friends or of doctors who will hold a long conversation just in the room or passage adjoining to the room of the patient, who is either every moment expecting them to come in, or who has just seen them, and knows they are talking about him. If he is an amiable patient, he will try to occupy his attention elsewhere and not to listen—and this makes matters worse—for the strain upon his attention and the effort he makes are so great that it is well if he is not worse for hours after. If it is a whispered conversation in the same room, then it is absolutely cruel; for it is impossible that the patient's attention should not be involuntarily strained to hear. Walking on tip-toe, doing anything in the room very slowly, are injurious, for exactly the same reasons. A firm, light, quick step, a steady quick hand are the desiderata; not the slow, lingering, shuffling foot, the timid,

uncertain touch. Slowness is not gentleness, though it is often mistaken for such; quickness, lightness, and gentleness are quite compatible. Again, if friends and doctors did but watch, as nurses can and should watch, the features sharpening, the eyes growing almost wild, of fever-patients who are listening for the entrance from the corridor of the persons whose voices they are hearing there, these would never run the risk again of creating such expectation, or irritation of mind.—Such unnecessary noise has undoubtedly induced or aggravated delirium in many cases. I have known such—in one case death ensued. It is but fair to say that this death was attributed to fright. It was the result of a long whispered conversation, within sight of the patient, about an impending operation; but any one who has known the more than stoicism, the cheerful coolness, with which the certainty of an operation will be accepted by any patient capable of bearing an operation at all, if it is properly communicated to him, will hesitate to believe that it was mere fear which produced, as was averred, the fatal result in this instance. It was rather the uncertainty, the strained expectation as to what was to be decided upon.

"I need hardly say that the other common cause, namely, for a doctor or friend to leave the patient and communicate his opinion on the result of his visit to the friends just outside the patient's door, or in the adjoining room, after the visit, but within hearing or knowledge of the patient is, if possible, worst of all. * * *

"Unnecessary noise, then, is the most cruel absence of care which can be inflicted either on sick or well. For, in all these remarks, the sick are only mentioned as suffering in a greater proportion than the well from precisely the same causes. * * *

"A nurse who rustles (I am speaking of nurses pro

fessional and unprofessional) is the horror of a patient, though perhaps he does not know why.

"The fidget of silk and of crinoline, the rattling of keys, the creaking of stays and of shoes, will do a patient more harm than all the medicines in the world will do him good. * * *

"Again, one nurse cannot open the door without making everything rattle. Or she opens the door unnecessarily often, for want of remembering all the articles that might be brought in at once.

"A good nurse will always make sure that no door or window in her patient's room shall rattle or creak ; that no blind or curtain shall, by any change of wind through the open window, be made to flap—especially will she be careful of all this before she leaves her patients for the night. If you wait till your patients tell you, or remind you of these things, where is the use of their having a nurse? There are more shy than exacting patients in all classes, and many a patient passes a bad night, time after time, rather than remind his nurse every night of all the things she has forgotten.

"If there are blinds to your windows, always take care to have them well up, when they are not being used. A little piece slipping down, and flapping with every draught, will distract a patient."

These are not vain subtleties. Whoever does not feel the importance of these little matters has not the medical turn of mind ; it is by all means necessary to acquire this art of properly taking care of sick persons—an art with nothing brilliant about it, but which is so practical and so useful. To have been sick one's self, to know the wants of sick persons, is the secret of efficient nursing. It is necessary also to *love* the patient. There grows up between him and the one who takes care of him, not the physician,

a particular sort of intimacy, which is neither that of blood nor that of friendship, but which to a certain extent partakes of the characters of both, and which is almost as sweet to the giver as to the receiver. The *maternity of nursing* has something of the character of real maternity. What can they not accomplish when both united in a mother at once tender and devoted, intelligent and firm of purpose?

I will allow myself one reflection in regard to the necessity of withdrawing the patient from noise. Everything is thought of in the planning of the different rooms of a large and luxurious dwelling; a place for sleeping, for eating, for working, a reception-room, a retiring-room, etc., but no place for being sick, that is to say, no place where there is to be found that combination of conditions favorable to comfort and repose which a state of sickness makes necessary. One is sick, or one may be, in a chamber small or spacious, bright or gloomy, secluded or serving as a passage-way, airy or stifled, exposed to the north or to the south, protected against street noises or directly open to them. Really, this is not as it should be. When a house contains sick persons, it should be declared in a *state of disease;* that is to say, provisional authority should be vested in the physician to choose the room which seems to him most convenient as a lodging for his patient and the best fitted for his own measures of treatment.

But I confess that I am skeptical as to the possibility of procuring silence even in such a case: so much does sympathy feel called upon to talk, and zeal to show itself in advice, orders, etc.! Besides, there are persons who are fated to make a noise; it is one of their functions: they walk, "and their step shows them troublesome;" they shake the floor, their shoes creak, their joints crack, their

awkwardness causes needless collisions ; their voice is loud, and their best-intended efforts to deaden it end only in the emission of fatiguing notes and annoying whispers, to say nothing of their incessant itching to make known their presence by their words or their dead silence. The Greek poet Menander has said: "The garrulous physician is an additional ailment for the patient." I grant this, and I remember some instances in proof; but, if that is true of a physician whom the patient sees for a quarter of an hour a day, how must it be of the nurses with whom he lives?

It is good to recommend silence, it is excellent to grease the door-hinges; but the surest of all is to put cotton into the patient's ears. I never omit, in cases of acute disease or in nervous persons whose sense of hearing is morbidly acute, to employ this simple, but commonly neglected, precaution. I recommend it to mothers; they can more easily close the ears of their children than the mouths of well-meaning, but noisy, persons who come to offer them their assistance. I think, with Epistémon, that "deafness is the only remedy against woman's interminable talk." (*Pantagruel*, livre III. ch. XXXIV.) Although this advice is of child-like simplicity, it is of extreme practical importance, especially in practice among the poor, where contracted space condemns the sick and the well to dwell together promiscuously in one room.

III.

In acute diseases, with fever or great nervous excitement, patients should be kept in a partially darkened room; in chronic diseases, with pallor and debility, the chamber should be flooded with light: such is the rule of practice in regard to the lighting of a sick-room.

The alcove, the curtains, and the blinds constitute a triple protection against a too powerful sun, while a few

very ordinary precautions render artificial light inoffensive, in case its use is necessary during the night.

Light, like heat, of which it is only a modification, is in the highest degree an excitant: exciting by its action upon the sensibility of the skin, by the impression conveyed to the brain through the medium of the eye, and thence reflected upon the entire nervous system. Delirious, nervous, or feverish patients should therefore be kept away from the light. The effect of blinds or lattices sufficiently fulfils this indication; colored or figured curtains may prove disadvantageous: the little patients, turning instinctively to the light, like plants, may derive from the objects depicted mental impressions which may assume the shape of hallucinations.

The artificial illumination of the chamber at night is a more important thing than is commonly supposed. It should be so arranged as to allow the patient to see surrounding objects, without dazzling his sight, without affecting the purity of the air, and without casting shadows capable of giving rise to hallucinations in a brain worn down with fever or delirium.

It is well known how little art is generally employed to prevent lamps from smoking. Impure oil, a fan-like, uneven, or too high wick; a chimney too long or too short, an insufficient draft about the wick, etc., are so many hindrances to the proper working of a lamp. It is well known also that the disagreeable feeling produced in well persons by a flickering light amounts to a serious disturbance with sick persons: acrid, irritating and ill-smelling products are diffused through the air of the room, and provoke coughing or lachrymation; moreover, lampblack is scattered through the air, is inhaled by the patient, and may be found in the expectoration. The means for reflecting or concentrating the light also need to be carefully

selected. Opal and porcelain shades allow too great a range of light, and are not as good as paper ones of a uniform color. We should reject also those fanciful shades with figures of animals, flowers, or fantastic characters and those ornamented in relief, as distracting to the view. It is needless to say that a candle is a detestable means of illumination. Neither can we tolerate kerosene lamps, the light of which is white and brilliant, but which load the air with a certain proportion of the odorous liquids which feed them, in addition to the usual products of combustion. On the other hand Millès' little gas *bougeoirs*, furnished with an obturator, are very convenient in the sick-room; a regulator allows of the flame being reduced to such dimensions that the chamber is almost dark, while a reverse movement illuminates it sufficiently for any service about the patient.

As for nursery lamps, the simplest and least ornate are the best, and when they work well (which is rarely), they furnish the means of warming drinks, and avoid the necessity of a fire in the room during summer.

For reasons already stated, too much care cannot be taken to place the lamp in a suitable position. This is to be ascertained by trial. I have seen children whose eyes were held riveted upon the floor, crying wildly. A shadow projected by some article assumed, in the subdued light of the chamber, a fantastic size and appearance, and was thus the occasion of their agitation. If such a shadow be that of the watcher, it is movable, and therefore all the more likely to excite fright and delirium. By placing the lamp in different parts of the room, we shall at length find some prominent piece of furniture or other object which will do away with this annoyance.

But, during convalescence or in the course of a chronic disease, the aspect of things is changed; the sun is no

longer an unwelcome visitor: he is a succoring friend, almost a physician. No drug can take his place in chronic diseases, and he should be allowed free access. An Italian proverb justly says: "Where the sun does not enter, the doctor does." And another: "All diseases come with the shade and get well by daylight." For the sake of being expressive, this is somewhat forced; but these two sayings will illustrate the utility of allowing free entrance of sunlight into the sick room. It is not a mere matter of pleasing the eye and furnishing agreeable impressions to the mind, its influence is to an equal extent physical. Every one knows the leading part played by light in the process of vegetation; it is such that the green parts of plants act upon the atmospheric air in two ways diametrically opposed to each other, accordingly as they are acting in the sunlight or in shade; so likewise the processes of animal chemistry in man require sunlight for their energetic and regular accomplishment. Indeed this is the *sine quâ non* of perfection of development and symmetry of form, as demonstrated by accomplished physiologists.

But the salutary influence of the sun is exerted in another manner also. He is an indefatigable chemist, working incessantly at burning, oxidizing organic matters and reducing them to the simpler constitution of mineral substances, thus rendering them innocuous. Besides, he is the born enemy of fungi and mould, that malign family which delights in obscurity, in which it increases and multiplies freely, a suspected family, the half of whose misdeeds are scarcely known to us. "Who has not had occasion to observe," says Miss Nightingale, "the purifying action of light, and especially that of the direct rays of the sun, upon the air of a chamber? Enter a room whose blinds are always kept closed, and, although it may

be uninhabited, although the air may not have been tainted by respiration, you are struck with the disagreeable odor of mould which it exhales." It must not be supposed that the heat of a fire can replace the sun as a means of purification. Undoubtedly a grate is a valuable means of ventilation; it renovates the air of the room, and, by drying the organic matters which pervade it and attach to the furniture it contains, it reduces their activity to the mimimum; but they will again take up moisture, and will then exhale noxious emanations anew. The purifying action of the sun is more lasting and more thorough. "Of all flowers," says a modern writer, "the human flower has most need of the sun." Let mothers who have to re-establish a system racked by an acute disease or struggling with a chronic ailment bear this saying in mind. It is as true as it is graceful.

IV.

The temperature of a sick-room is generally either neglected or badly attended to. One need not be a physician in order to understand that a child with fever or cough is affected by the temperature about him. The aid of the thermometer is imperatively necessary.

There are few houses destitute of this instrument; but there are few mothers who know how to use it properly. So, in graduating the temperature of the room, they are guided by their own sensations, which, in the first place, are not sufficiently precise, and, in the second place, cannot be considered as representing those of the patient. At the risk of giving offence, I will give them a few hints upon how to use the thermometer. How often have I seen this instrument placed heedlessly between two doors, and consequently in a current of comparatively cool air, in the neighborhood of a heated chamber or of a large

lamp; resting on wood, velvet, or marble; at various altitudes! Although strictly accurate thermometrical observation is not called for, yet we should always endeavor to do well what we do at all, and these observations with the thermometer are usually badly done.

It is proper to place the thermometer on a level with the patient, in order to find the exact temperature of the layer of air which he is breathing; to prevent any influence of local heat; to take it down occasionally, and to keep it, as much as possible, suspended and isolated.

The temperature which is most usually appropriate is that of from 14° to 16° centigrade [57.2° to 60.8° Fahrenheit]; and the attempt should be made to maintain it, by attending to the fire in the winter, and by renewing the air, or resorting to the evaporation of water, during the summer. Generally, people incline to excess of heat, rather than of cold, and we have to contend against the tendency in families to inordinate elevation of the temperature, to overload children with coverings, and to imprison them behind hermetically sealed curtains. Fatal prejudices of this sort are prevalent in regard to the eruptive fevers, and they are not new, since Sydenham, one of the greatest physicians of the seventeenth century, took pains to combat them vigorously, although he could not hinder them from pursuing their course and remaining in the ascendant.

The maintenance of the proper temperature in a chamber, during winter, depends on its exposure and on the working of its chimney. Whenever possible, a child's winter sick-room should look towards the south: this will prove highly advantageous during acute attacks, and still more so during convalescence. Moreover, a chamber with a southern exposure gives ample access of sunshine, which is no slight consideration.

I have already spoken of the necessity of carefully selecting the chamber for a sick child. In winter, the best one is the one which is most perfectly closed, and the chimney of which does not smoke. A good chimney is almost as priceless as a good friend; but both are rare, and neither can be known except by experience. What a pest is smoke in a sick-chamber, causing suffocative cough, oppression, lachrymation, and cold! A *Treatise on Caminology* has been published, devoted to the art of stopping chimneys from smoking, but it has not very much advanced the art. A too large or a too narrow flue, an opening through which several fires discharge their smoke into the same flue, an insufficient draft owing to too closely-fitting doors and windows, the action of a door of communication between two adjacent rooms, that vicious arrangement of placing the chimney at the same side of the room with the door, clogging, occasional squalls, etc.: these are so many causes of the imperfect action of chimneys, and, consequently, of discomfort to patients. Apart from the lowering of temperature, there is another bad feature, viz., stopping the draught with a damper, and consequently suppressing that natural and very effective means of ventilation.

Coke, and *à fortiori* hard coal, are but imperfectly combustible: they give out an intense but not very agreeable heat; they are not cheering to the eye, and, unless the draft be perfect, when they are lighted or extinguished they fill the room with ill-smelling gases, which may cause headache.

As for stoves, they are really annoying, as may be constantly seen in those unenterprising hospitals where this defective mode of heating is still in full use. I myself have seen a patient, over whose bed a highly-heated stove-pipe passed, suffer from headache for several days without

complaining, and then be seized with symptoms of a brain fever to which he fell a victim. And such cases cannot be very rare.

The *brasero*, employed in the south of Europe and in some of the southern Departments of France, may be unobjectionable in a spacious and airy chamber; but they are unfit for use in a sick person's room. The baker's *braise de charbon*, as is well known, is far from affording, in this respect, the particular conditions of advantage which have been attributed to it.

It is somewhat difficult to maintain a uniform temperature in a chamber: the presence or absence of the sun upon the windows, the number of occupants, the mode of artificial illumination, the effect of doors, render the problem rather complex; but with a wood fire, together with strict watching of the thermometer, it can be accomplished.

In acute diseases, and especially in diseases accompanied with fever, it is proper to maintain a temperature between 14° and 16° cent. [57.2° and 60.8° F.]; this is not oppressive to the bronchial mucous membrane, does not induce headache, and gives full play to any tendency of the disease to the skin; the patients can, moreover, uncover themselves in bed without risk of taking cold; but there are cases where it is desirable to excite sweating, or overcome a tendency to chilliness, and then this temperature should be pushed to 20° cent. [68° F.] or higher. The physician is to judge of this, and to direct it.

In hot countries, or during summer, it is often a prime object to cool the air within the room, and it must be confessed that this is less easily done than the warming. People are singularly frightened at the entrance of air, and the patient, bathed in a hot and heavy atmosphere, in addition to his fever heat, becomes unspeakably wretched. Opening the window, instead of lowering the tempera-

ture, raises it by admitting the broiling air from without. There is no resource except in a current of air between two openings, the bed, of course, being placed away from the line of draught.

There are two methods of cooling air: the evaporation of water and the melting of ice. When it is desired that the air should be at the same time cool and moist, this double result is accomplished, not by leaving the water to spontaneous evaporation from vessels, but by moistening with it a very large piece of cloth and keeping it suspended in the room. The habit of sprinkling the floor accomplishes the same end. The ancient physicians ordered their patients' chambers to be hung around with green boughs devoid of odor, purposing at the same time to purify and cool the air, and to please their patients' view.

The idea of cooling the air by means of shallow vessels containing ice is so simple that it is astonishing it has not yet been done. I am aware that an ingenious pharmacist, M. Stanislas Martin, proposed, as early as twenty years ago, an apparatus, a sort of fan or ventilator placed outside of the apartment, into which it forces air cooled by passing over ice ; but it seems to me that the means I have just pointed out is more simple and more practical. When once the temperature of 15° or 16° cent. [59° or 60.8° F.] has been obtained, the refrigerating vessel may be removed, and may be again brought in if the air becomes too warm. In many cities, during periods of great heat, ice is to be had at a small price.

This means is therefore simple and inexpensive; I think it capable of procuring real comfort for patients, and indeed of accomplishing certain salutary changes in their condition.

I might present many other remarks upon this impor-

tant matter of the arrangement of the sick child's chamber, and a volume would scarcely suffice to the infinite variety of detail concerning it; but I trust that I have said enough to show mothers the importance of this matter and to give them a taste for its consideration.

CHAPTER XI.

CLEANLINESS AND THE ARRANGEMENT OF THE BED.

Cleanliness is the chastity of the body.—Bacon.

Petits soins, grands résultats.

If, as Hufeland has said, cleanliness is the fundamental pillar of health, is it not still more indispensable in disease? In this case, everything conspires to defile the circumscribed atmosphere surrounding the little patient: the air admitted sparingly (too sparingly, without doubt); the room visited by too many people; unpleasant or noxious odors: it is indispensable, then, to maintain scrupulous and exquisite cleanliness—Dutch cleanliness.

I have already said what I thought of the particular measures demanded, in this respect, in the sick-room of a child; and have to consider now only their personal cleanliness. Singularly tenacious notions prevail in regard to this matter, too often causing children to be kept confined to bed in a state of filthiness.

The care of the skin, of the hair, and of the linen is to be considered.

I.

It would seem that there was an innate incompatibility between disease and the sponge. Disease appears and ablutions cease, and it is not rare to see children deprived for whole months together of the cleansing contact of

water; whence the mottled face, which no longer possesses either its natural tint or its accustomed expression beneath the layer of dirt which covers it, the skin which no longer performs its functions, and the respiration drawing its supplies from an infected and altered air; whence the tendency to inflammatory affections of the skin and to excoriation of those points sustaining the weight of the body; whence also a downright annoyance to the physician. The latter is undoubtedly the least of its ill effects, and the delicacy of one's senses meets with many other affronts; but cleanliness is a grace; like beauty, it attracts us and holds us; we remain more willingly by the side of the cradle over which that industrious fairy has stretched out her wand; we make a more prolonged examination; then too, perceiving that we are dealing with a well-nursed child, we know that our directions will be properly understood and thoroughly carried out, and we do our part with confidence and zeal.

Who is there who has not felt himself seized with a sort of discouragement upon approaching a little bed in disorder, covered with the most incongruous objects—articles of bed-clothing, garments, and playthings, all hopelessly confused; and upon finding in the midst of this chaos a poor little patient, dirty, dishevelled, exhaling a nauseous odor, and buried beneath filthy clothes? Pity draws us, disgust repels; pity prevails, but 'tis a hard fight; I will say more—it is disheartening, for a child kept dirty will lack attention in many other respects.

Were this neglect met with only in attics and among the poor, we should be very pressing in our injunctions, but very moderate in our complaints. Misery is indeed a bad counsellor, and discouragement and self-abandonment easily slip in by the door which she holds half open. But uncleanliness, in varying degrees, is sometimes met with

where refinement and taste should, it would seem, repel its access. A child well washed and combed is the pride of his mother, to whatever station she may belong; she should take still more pride in it when he is sick, because then, servants being supplanted, her own responsibility is more directly called in question, and her child's face becomes the distinguishing sign of an attentive or a negligent mother.

There are two causes of this lack of cleanliness—carelessness and prejudice. Carelessness is culpable, prejudice is saddening. Neither the one nor the other is to be tolerated. They will disappear when ignorance goes to the wall, that is to say, when, better versed in their own interests, people understand the value of health, and accord to it, amid the busy cares of life, the importance which of right belongs to it. A piece of good advice and a sponge will put an end to carelessness; but prejudice is tenacious, and will not yield to such an attack.

Those who give their children too few baths during health, will scarcely dream of cleaning them when they are sick. All this is relative. It is notorious that, with us at least, ablutions are indulged in too sparingly. English education, still pervaded by the ideas of Locke, makes great account of them, and prepares the infant, by the daily use of the nursery-basin, for this salutary habit. The little Triton across the Channel takes early and lasting possession of the liquid element over which he feels himself destined to rule. Would that a little emulation would seize upon us; doubtless we should not thereby achieve maritime supremacy, but we should gain a little of that vigor which plays an important part in the destinies of peoples. To bathe children early and to bathe them often is a necessity of physical education.

The treatment of every disease should, unless forbid-

den by the physician, begin with a tepid bath. Administering a bath to an adult is a difficult task, especially when he is sick, but a child's bath is the simplest thing in the world ; the baby is easily handled, put into the bath, and taken out from it; he is then wrapped in a blanket, and the thing is done. By taking this precaution, we insure the free action of the skin (a matter of no small importance), prevent excoriations, and get rid of one cause of impurity of the air ; it is, then, a most material benefit.

It is a more delicate matter to estimate the utility of *baths of cleanliness* in the course of the acute diseases of children. It may be said that this practice is completely abandoned. Baths are given only as a curative measure, and yet, from this limited point of view, all is not derived from them that could be desired. The old physicians knew the value of baths better than we do, since they lived in a time when the daily bath was among the necessities of life. They prescribed baths in almost every acute disease. Hippocrates himself has handed down to us most judicious advice upon this point, and, in the list of diseases which allow of their use, he does not hesitate to mention *pulmonary catarrh ;* and he supports this advice with reasons of a substantial character, which I refrain from quoting, not wishing to lapse into a too strictly medical course of writing. Physicians should combat this routine, born of inconsiderate fear of chills. Besides the fact that these can *always* be avoided in infants, there are conditions of temperature and season which render such fear perfectly groundless. When we think of the great comfort produced by a tepid bath in a child worn out by loss of sleep and racked by fever, of the sprightliness which results therefrom, and of the necessity of preserving to him the entire physiological activity of his skin, we cannot but regret that physcians and nurses do not more often avail themselves of this precious resource.

But, how should it be so, when even the cleansing of the face and hands is so commonly omitted? Every day we see children passing through long illnesses without any ablution at all. It may well be asked what objection there can possibly be to rapidly passing a sponge, soaked in warm water, over a child's hands and face, taking care to dry them promptly with warm cloths or light flannel. Indeed, these daily ablutions should not be limited to these parts, but should include any soiled portion of the surface. In the practice of them, there is a dexterity, either innate or acquired, which avoids all the disadvantages so freely imputed to them. If, as Chancellor Bacon cleverly said, cleanliness is the chastity of the body, it is also its safety, and more so in disease than in health.

The frequent changing of sick children's linen is an absolute necessity. This rule is violated from two causes: from poverty and from routine.

Poverty wrings the heart, but it does not invalidate reason. Doubtless the time will come (and I long for it with all my heart) when an extensively organized domiciliary assistance service will enable poor families to be furnished, during sickness, with a portion of the material resources enjoyed by those in good circumstances; but when will the time come for routine to abdicate? That evil genius lies hidden in every corner of a sick child's room, and rules every detail of management, even the most humble—change of linen, for instance.

Physicians daily have to combat the prejudice which attributes bad results to a change of clothing, especially when the little patients are covered with perspiration; it is then, of all times, that it is particularly needful to renew the dress, sometimes two or three times a day. The fear of checking perspiration is unfounded; nay, more, dry linen will rather encourage it, as being capable of absorb-

ing moisture, and thus preventing the chilly feeling produced by damp clothing.

It is a famous notion among mothers and nurses, that span clean linen (the traditional expression) is bad for sick persons. Buchan (*Domestic Medicine*), who has treated of this question, considers the opinion a mere prejudice, and denounces the practice, common in certain households, of causing a patient's linen to be previously worn for a few hours by a well person. It is questionable as regards cleanliness, and should give place to other means of warming and drying linen; but bleached linen is more commonly cold than the unbleached, owing probably to a remnant of alkaline salts in its meshes attracting moisture from the air. This is easily obviated, and by methods known to all mothers.

In acute diseases, a child's linen should be wholly changed at least as often as once a day. If it is carefully done, there need be no fear of chilliness or fatigue. The latter would be still more surely prevented, were the cotton or linen clothes worn next the skin so fashioned as to admit of readier adjustment. Disease and health have diametrically opposite needs; the shirt closed in front, so tickling to maternal vanity, is inferior to the pinafore, which is put on and fastened in a twinkling, without fatigue, and without much change of the child's position. Whoever has witnessed the complicated gymnastics gone through with in putting a shirt upon a feeble child, or one whose limbs are in pain, will perceive that this is no trivial matter.

Children's body-linen, then, should be kept in a strict state of cleanliness. Nothing connected with the sad bed of sickness is so cheerful to the eye as a perfectly clean bed, neatly-ordered coverings, and a snowy white dress. In such evil days, this is the only vanity left to mothers,

and they should indulge it; it is proper and salutary, melancholy though it may be.

The care of the hair is of particular importance. To keep it as close-cut as possible in children is a general custom, and one which cannot be too highly praised. But in little girls this course is forbidden by fashion, and it is proper to gather their hair under a net, so that it shall occupy as little space as possible, and, for the sake of coolness and comfort, leave the neck entirely bare. Thus far, there is nothing special to be said; but in the care of the hair there are two drawbacks—the annoyance of the comb, and the lodgment of the parasites which flourish in certain children.

In many countries it is considered that the combing of a sick child's hair involves serious dangers; consequently the hair is allowed to become matted together, forming a sort of inextricable felt, impregnated with perspiration, exhaling a sour, nauseous odor, and constituting an agglomeration of Gordian knots which the scissors alone can deal with. This is a serious matter, as regards both the cleanliness and the preservation of the hair; undoubtedly the time would be ill-chosen for setting about an artistic *coiffure;* but the hair should be combed out, in order that the air may circulate through it, and thus keep the scalp comfortably cool. No one would think of fitting an impermeable skull-cap to the head of a feverish or delirious child—it would surely increase the trouble; but neglect of the comb amounts to the same thing.

The notion that the growth of parasites in the hair is useful, and not to be interfered with, is deeply rooted, and facts are unhesitatingly invoked to support it. As this disgusting complication shows itself chiefly in cases of some disease accompanied by increased secretion from the hairy scalp, and disappears at the same time with the

latter, its disappearance has not escaped being charged with certain grave accidents which occasionally occur at such a time, and which should rather be attributed to the suppression of a secretory flux to which the system has become accustomed. The indulgence thus enjoyed by these parasites rests upon utter error. While it is necessary to treat these habitual fluxes from the scalp carefully, it is equally necessary to exterminate these unwelcome guests, which, to say nothing of their disgusting character, annoy children, deprive them of sleep, and exhaust them. I have seen, and probably not I alone, neglected children invaded by myriads of these parasites, and for that reason they remained pale and emaciated, with their eyes surrounded with a blue circle, and failed to attain their full development. Between this state and the ignominious death of Sylla and Herod, the difference is one of degree only.

We should make haste to eradicate them immediately upon their appearance, when they have not yet irritated the scalp by their presence, or by the itching which they induce, when there is no abnormal secretion, and it is advantageous, and in no wise risky, to suppress them. Attention to cleanliness is sufficient, but it should be unceasing in order to be effective; this will readily be understood by reflecting that a single female lays over 4,000 eggs a month, or about 140 a day, which enormous multiplication soon becomes overpowering if not promptly stopped.

Very fortunately, there are substances which exercise a powerful influence against it, and their efficacy is well known among the people: such are certain essences, the essence of lavender, for instance; bitter decoctions, like that of centaury, but especially stavesacre, cocculus indicus, tobacco, and mercurial ointment. The three latter

are very dangerous, and their use should be abandoned; cases are not rare in which children have been poisoned, or rendered seriously ill, by these substances. Pomades or decoctions of tobacco, employed for this purpose, have many times produced grave accidents. The powder of stavesacre is harmless; it is to be used for three or four successive days, taking care to make it penetrate as near as possible to the roots of the hairs. The use of olive oil, or of oil of sweet almonds, has also been advised, which acts by smothering the insects. It would be interesting to try upon them the insecticide powders which are so deadly to other parasites.

In a word, it will be seen that the utterly gratuitous prejudice which favors their growth must be renounced; cleanliness, rest, and, I may add, dignity, are at stake.

II.

The wisdom of nations has declared, "As you make your bed, so must you lie." But the child is passive in this as in so many other matters, and the care of it falls to the mother. It may at first sight appear presumptive to offer her advice upon a matter which seems to be strictly and exclusively within her sphere; but nevertheless I hope to justify this encroachment upon her domain.

The physicians of antiquity did not disdain to occupy themselves with this question, apparently so trifling, and, were not erudition out of place here, I could easily support this assertion by three or four pages of citations. Their hygienic wisdom appears to us to border on the minute, and those who are too much given to the lofty flights of medical speculation seem afraid of lowering themselves by attending to such details. They do not, indeed, promise much glory, but, by way of ample amends, they play an important part in the well-being of sick children.

A free circulation about a child's bed is indispensable to his being easily taken care of, and to sufficient aeration. Alcoves, so justly condemned by hygiene, should find no favor; they are receptacles for miasm; air and light do not enter them sufficiently, and it is difficult to keep them clean. An isolated bed is better—one that can be changed from one part of the room to another.

The introduction of iron bedsteads, or cradles, constitutes a real advance in the matter of cleanliness and comfort. To appreciate the benefit of substituting iron for wood, it is only necessary to call to mind the wooden beds of the old hospitals—cubic boxes, as it were, of white wood, having the shape, and almost the odor, of a coffin. Iron realizes all the advantages of cleanliness, lightness, facility of cleansing, freedom from parasites, and cheapness. Iron beds do not, like those of porous wood, absorb unwholesome miasms, and, instead of confining the air, like the old-fashioned beds, allow of the freest circulation. The wooden bedstead is destined to disappear from our dwellings, and hygiene will not mourn its departure.

Ending this digression, I will return to children's beds. It is important that cradles made with bars should not be lined with any material which may prevent the passage of air and moisture; appearances may be sacrificed, but cleanliness is the gainer.

The straw bed, erroneous in principle, has gone out of use; the elastic hair mattress has fitly supplanted it. It furnishes a more elastic and a more even support, and constitutes an infinitely more convenient bed. Yet the straw bed is better for children, because they slip less upon it, and because uncleanliness is easily overcome by frequent changing of the materials (corn-husks, sea-weed, straw, etc.) with which they are stuffed. Moreover, in-

fants, and some older children, troubled with incontinence of urine, could not, even when sick, be conveniently placed upon any other bed. The interposition of an impermeable sheet is but an insufficient protection, and a mattress several times soiled always retains a repulsive odor.

A small hair mattress and a low pillow complete the bedding. The pillow should be of hair or of straw, never of feathers, so that the child's head may be kept comfortably cool. This is still more easily achieved by having a relay of pillows thoroughly aired, a fresh one to be used every three or four hours. This is especially important for children suffering from fever or any brain trouble.

The English use mattresses and cushions filled with water. They are rather dear, but they may be obtained from apothecaries. This form of bed, allowing of graduating the temperature at will, and of any degree of hardness or softness, is extremely advantageous in long illnesses, and for emaciated subjects ; it is almost a sure preventive of that terrible complication known as bedsores. Doubtless, the slight weight of a child's body, and the greater vitality of his skin, lessen the chances of such accidents ; but, when they are very much emaciated, the *water-mattress* may nevertheless be employed with great advantage.

Concerning feather beds and bolsters, I will merely say that, detestable for adults, they are still more so for children. Being bad conductors of heat, they are unpleasantly warm ; they become impregnated with moisture and miasms, and the stale odor of feathers is always suspicious. Moreover, cases are not rare of very sensitive persons, asthmatics, for instance, who renew their sufferings whenever they sleep on a feather bed, or cover themselves with eider-down.

The question of curtains, very much disputed in the matter of hospital beds, is less important in private houses. I esteem them a convenient means of shielding the patient from noise and glare ; moreover, they may be so constructed as to be drawn up on to the frame when not in use, and thus in no wise hinder the free access of air.

I have already stated how much the inconveniences of confinement to the chamber are aggravated by deficiency of air and by overheating ; I need, therefore, only point out the danger of the thick and heavy coverings beneath which children are buried. Their sensitiveness to cold is notably less than ours, and, while they should be very lightly covered in health, we should likewise be very careful not to overload them with coverings when they are sick. It increases fever, sometimes provokes delirium, excites sweating, and keeps the child's body in a vitiated atmosphere.

In intractable patients, or those constantly tossing about from febrile excitement, if it be necessary to keep them covered, as for instance in certain of the eruptive fevers, and during winter, we may use with advantage the *pages* or metallic clasps which served, a few years since, to hold up ladies' dresses. The coverings are kept in place by this device, the usefulness of which I have often had occasion to appreciate.

I have shown the advantage to sick children of arranging, whenever possible, two communicating chambers which may each be aired in turn ; it is also a good plan to give them two beds, between which they may divide the day : it is highly conducive to comfort and repose, and very wholesome. If these are placed in reverse positions, the child will rest upon either side alternately, and thus fatigue will be mitigated. This brings me to a consideration of the child's posture during sleep.

If there is any fact well recognized, it is the necessity of frequently changing a child's position in bed. He should be laid first upon one side and then upon the other, and kept well supported with pillows; in no case should he be kept long in the horizontal position. This posture notably slackens the circulation; it embarrasses the action of the lungs, which gradually become engorged, and children, especially very young ones, have a tendency, from this mere fact, to become chilled or even asphyxiated. Therefore, in hospitals it is expressly recommended to take the children up from time to time, and walk with them in the arms, or at least to change their position. If they are larger, they may be rested and amused at the same time, by walking around the chamber with them, or holding them on the knee. There are very few diseases, even of the acute sort, in which this latter practice is not of advantage and may not be repeated three or four times a day. Little feminine ways, moreover, perfect this graceful and wholesome proceeding, and the child stretched upon his mother's robe as in a cradle, clasped in her arms, with his head laid against that heart which is wholly his, nestles in this dear retreat, like the opossum in the fable, and finds there, in charming repose, rest for his weary little limbs and temporary relief from his sufferings. True mothers know how sweet these hours are, and how quickly they pass.

It is often asked if there is any advantage in rocking children, or at least if the practice is harmless. "The habit of rocking," I have said elsewhere (*Entretiens familiers sur l'hygiène*, 3d ed., p. 110), "has been the subject of much dispute, which, however, as usual, has not hindered it from being kept up. Among the Romans, there were professional rockers, both male and female. * * One might choose between a *cunaria* and a *cunarius*. But

one would have done well to take neither: not that we should look upon the act of rocking as capable of producing any serious derangement of health, and least of all, as is believed by the vulgar, of destroying the intellect; nevertheless it is certain that these oscillations, when excessively rhythmical and prolonged, cannot be regarded as entirely harmless. Besides, it is a habit, and one of the most tyrannical, which is of itself sufficient to condemn it. In the country, I have sometimes seen children subjected, in cradles planned for the purpose, to vibrations which would have given an adult the pangs of sea-sickness. Is this harmless? I doubt it. Is it agreeable? The child alone knows that, and unfortunately he cannot tell the story. His becoming quiet is no answer. Is he comfortable? Is he not rather subdued?"

A habit is not to be corrected during the progress of a disease; the time would be ill-chosen; we must tolerate those that are not too bad, and wait, as would be done in any other affair, for quiet before inaugurating reforms.

I cannot close what I had to say in regard to cleanliness and sleep, without speaking of nocturnal incontinence of urine, which does not, properly speaking, constitute a disease, but which is intimately connected with the cleanliness of children, and which therefore complicates the care of them while in bed. Moreover, I shall give some advice upon this matter, which may be of aid to the mother's vigilance.

Happily, the nocturnal incontinence of urine of children is a temporary infirmity, but it is very unpleasant, and occasions mothers a well-founded solicitude. It appears to show itself with about equal frequency in the two sexes, but I am disposed to think that in little girls it is more lasting and more difficult to cure. Indeed, instances are not rare of young girls in whom incontinence of

urine has continued after the establishment of puberty. It is a most mortifying weakness, often causing chagrin to both the child and its parents, and which may give rise to evil consequences of more than one sort. It is an object, then, to attempt to cure it, or rather to shorten its duration, for, I repeat, it tends to spontaneous recovery in the great majority of cases. The management of nocturnal incontinence of urine involves both domestic and technical medicine. There is nothing urgent, life being in no wise threatened. Months of failure do not diminish the chances of ultimate success; it is one of those very rare cases in which the loss of a little time does no harm.

At about the age of two years or two years and a half, well-bred children have generally acquired habits of cleanliness, and it is only exceptionally that they wet the bed. When such an accident happens to them, it is important to distinguish the involuntary cases from those which are due to laziness. Its occurrence during winter is a fair ground for suspicion. In the former case, we must counteract by assiduous supervision a vicious habit which may easily be contracted; in the latter, we must act by intimidation. The eruption of the four anterior molar teeth, at the age of four or five years, and the process of the second dentition, are often the occasion for the appearance of incontinence of urine, or for its reappearance when it has previously existed. The excitement of the urinary apparatus determined by the eruption of the teeth, which is perfectly well known to mothers and nurses, now reproduces its usual effects. Often, also, incontinence of urine reappears under the influence of a lowered condition of the general health, accidental debility from bodily or mental fatigue, convalescence, or the inception of a more or less grave disease. It is not proved that worms, even those which infest exclusively the lower portion of the intestines, contribute at all to this result.

But there is a cause of incontinence of urine which mothers should be acquainted with, in order that they may not uselessly resort to extreme measures, and that they may call in the physician in case it does not yield to the well-regulated exercise of the function : I allude to the profound sleep which is peculiar to certain children.

J. L. Petit, a surgeon of the seventeenth century, divided children affected with nocturnal incontinence of urine into three classes : (1) lazy children ; (2) dreamers ; (3) profound sleepers. The first would have been proper subjects for the rod in the times when this useless severity was customary. The second are bright children, with a lively imagination ; their brain, perceiving the necessity of urination, responds by imperfect intellectual combinations, and they dream that they are properly circumstanced for satisfying the desire ; but, in them, it is an uncommon and casual occurrence, recurring only at certain intervals. Moreover, this class is by far the least numerous. The third class is composed of children whose sleep is so deep that they do not at all feel the sensation of a desire to urinate, and perform the act passively and wholly unconsciously. On attempting to change the habit in such children by taking them out of bed, they allow themselves to be lifted like an inert mass, and several minutes are sometimes consumed in various measures to rouse them, without their waking. These children generally wet the bed during the first three or four hours of the night, *i. e.*, during the time when sleep is the most necessary and the most profound. Children with a large head, whose intelligence is slow of development, and whose bodily activity is moderate, are particularly inclined to this unnatural sleep, which physicians have not yet described, and which certainly has claims upon their attention, since it undoubtedly gives rise to other bad consequences besides noctur-

nal incontinence of urine, and of which it may be questioned whether it does not constitute a sort of predisposition to cerebral affections. In such children, the incontinence is not permanent; it occurs in periods of several weeks or months, and, in the interval, the children are observed to be more lively during the day, and to sleep much more naturally at night.

Physicians prescribe a multitude of drugs for nocturnal incontinence of urine, each of which may possess its special utility, but the management of which is hazardous, and consequently should rest wholly with them. There are also mechanical means, the use of which may lead to a cure; but here again medical discrimination comes into play. The mother's part, in such a case, should be restricted to an utter ignoring of the very complicated and most useless formulary of popular medicine, beginning with the classic mouse soup, which subjects the unfortunate children to perfectly useless disgust; to an intelligent distinction between real and simulated incontinence, so as to resort, in the latter case, only to disciplinary interference; to regulating the function, as much as possible, by the habit of taking the child up at an appointed hour, and accustoming him to holding his water as long as possible during the day.

It is proper, under all circumstances, to decrease the amount of drink, especially at the evening meal, and to avoid at this meal those articles of food which particularly excite the urinary secretion. Acid fruits, potatoes, and other food than meat should generally be avoided as much as possible; a substantial, concentrated diet is preferable. Soups, since they introduce a large quantity of water into the system, should be used with some caution. The urinary secretion having been diminished by these precautions, it is expedient; (1) to accustom the child to hold his water

during the day; (2) to take him up several times during the night, in order to endeavor to regulate the function.

A German physician, Dr. Schwandner, having remarked that children with nocturnal incontinence of urine found it somewhat difficult to retain that secretion during the day, conceived the idea that, if they were accustomed to resist the desire during the day, they might be relieved of their night infirmity. The physiological theory is satisfactory, but mothers have nothing to do with that; only the practical fact concerns them. To apply this method (which scarcely succeeds except in children ten or fifteen years old, *i. e.*, in rebellious cases), we must make them promise not to yield to the first sense of desire, but to restrain it, and even to sit down for the purpose of more easily accomplishing the result; after a short time, the bladder becomes less irritable, the child urinates only at long intervals during the day, and the nocturnal incontinence decreases and disappears. This result has been attained after a period varying from one to eight months. The three cases reported by the author were those of a boy of twelve years, another of eight, and a girl of seventeen; in all of them the incontinence was of quite long standing, and had obstinately resisted all other means. There is, then, good ground for trying it. I need not remark that this voluntary resistance to the wants of the bladder should not be carried too far: the object would be overstepped, the organ would become fatigued, and the incontinence would be transformed into retention; but, by regulating the urinations, to three or four a day in winter and two or three in summer, no risk of any sort would be incurred.

The habit of waking children up at a definite hour has the great advantage of promoting spontaneous waking, and, furthermore, that of guarding them from the evils of

a prolonged maceration in a urinous liquid, possessed of an ammoniacal odor.

When their sleep is too sound, which may be easily recognized by the signs above indicated, by giving them a few spoonfuls of black coffee at bedtime, we may bring this function to a normal condition, and consequently induce a temporary cessation of the incontinence. It is certainly in no other way that belladonna acts, but its use should be prescribed and regulated by the physician.*

In regard to cold ablutions, they are proper for pale, feeble children, without muscular vigor, but who have no cough or disposition to catarrh. The same is true of cold baths, habitually used in such cases by Baudelocque, Dupuytren, and Guersant; of sea-baths, as recommended by Underwood; and of aromatic baths, which Lallemand, of Montpellier, considered the most efficient means against this infirmity in pale, ill-favored children. The bath which he recommended in such cases was prepared with three or four handfuls of dry aromatic herbs, to be found at any apothecary's or herbalist's; they are to be covered with boiling water in a closed vessel, and a glass of brandy is to be added at the time of putting the child into the bath. He is to be covered, and kept in the bath as long as he finds it agreeable, after which he is to be rubbed with flannel. After a few baths, the quantity of aromatic herbs and brandy is to be increased. The number of baths varied from ten to thirty, and they were taken every day, or every second or third day, according to the effect produced. Lallemand seems never to have met with failure by this method. It is a good deal to promise, undoubtedly, but the proceeding is simple, and it assists the cutaneous function; if it does not cure the incontinence of urine, it cannot but be beneficial to the

* The same may be said in regard to coffee.—F. P. F.

general health ; it may, therefore, be tried without waiting for a medical prescription. The practice is within the domain of household medicine.

It need not be said that, in obstinate cases, and those which have resisted the simple measures I have enumerated, a physician should be called, and he often succeeds in curing the incontinence of urine.

* * * * *

The little patient's chamber being now arranged, his bed conveniently prepared, and his bodily cleanliness secured, it remains to treat of the auxiliaries who are called upon to aid the mother and the physician in the struggle in his behalf: I allude to the assistants and to visitors. We shall see what their function is, and what is to be expected of them.

CHAPTER XII.

ASSISTANTS AND VISITORS.

"Les meillieures visites sont les plus courtes."

ARABIAN PROVERB.

"Surtout pas de zèle."

TALLEYRAND.

HIPPOCRATES expressly enjoined assistants to do their work well, and he considered it almost as important as the physician's. Hippocrates was not at fault; according to our assistants are we taken care of, and accordingly as we are taken care of do we get well. This is particularly true in diseases of considerable duration, which need little medicine and a good deal of nursing—such as typhoid fever and the eruptive fevers; the physician and the mother count for one-half in achieving success. By assistants, we understand the whole household, parents and servants, and especially nurses, friends, and neighbors.

First of all, I will say to parents that, barring impossibilities, the care of sick children is their duty, or rather their privilege. J. J. Rousseau wrote something which mothers should always bear in mind: "Maternal tenderness is not to be obtained from without." I will add that it cannot be *delegated* either, or at least that it is perilous to delegate it. *To nurse* her child herself is a mother's imperative duty, strictly coterminous with possibility; *to take care of him* in sickness is none the less obligatory; it is the *nursing* which completes *lactation*. I will not

even advise the mother to yield up this prerogative to her children's grandmother: let her by all means profit by her experience, but she herself has also an experience to acquire, one which she will only too often feel the need of, and which, moreover, she should communicate to others; whence is she to derive it if she suffers this encroachment?

She must be a mother in every sense of the word; it is a privilege which she has paid for, and which she will pay dearly enough for rather than that another should dispute it. How often do we find in families, even the best of them, disagreements of this sort—disagreements which are peculiarly dangerous when kept alive by the pretensions of a mother-in-law! She appeals to an experience which is often fictitious, but which her age makes plausible; she seeks to carry things with a high hand; she finds in the respect and submission of her son a justification of her encroachments; the domestics receive contradictory orders, make merchandise of their obedience, and incline to the side which seems to them to wield real authority rather than to that of legitimate authority; the physician, not knowing who is the responsible person, does not fix responsibility upon any one; *the empire is divided*, and there is no more security.

This is not a fanciful picture; there is scarcely a day that it does not come under the eyes of the physician, who remains a grieved, but powerless, spectator of this lamentable conflict. If he takes the mother's part, he incurs an enmity prejudicial to his patient; if he enlists on the side of age, he at once blots out the maternal authority, which alone is legitimate, and increases the disorder. The *token* of the conflict is the steeple-chase to which both parties give themselves up in the matter of furnishing information. She who first takes the floor and keeps it has

subdued the other ; if they both talk at the same time, the struggle is still going on, and the physician may hope, by means of finesse and quick wit, to replace the authority where it is right and proper that it should rest. Grandmothers have but one function—that of indulgent tenderness ; the part of action does not suit them ; let them bring up their daughters properly, and teach them to nurse the sick, and they may afterwards leave them to themselves.

When a child is put to bed, the mother's post is by the bed or the cradle, it is her head-quarters; she may delegate ordinary household cares—this office she may not delegate. Who, equally with herself, would feel an interest in its faithful performance? Who would have as much zeal in watching, such a clear understanding of the expression of a desire or a pain? Who could so well furnish the voice which comforts, the caress which soothes ? Maternity has been represented in all its aspects; I know of none more eloquent than this ; saddened glory, trembling hope, jealous tenderness, all are blended in this touching type, which painters have too much despised. Mothers, you are fitly stationed, let no one take your place !

Let no one take it, but be willing to yield it. There is reason to be used in all things, even in devotion, if you wish that devotion to prove truly efficient. But, in diseases of long duration, this end is attained only by management. During the shock of the first few days, everybody presses to assist; whole nights are passed in common, no one sleeping, the whole household astir; but people are soon tired out, and finally are obliged, from sheer weariness, to look after themselves. It is not thus that we should proceed: *the burden must be shifted*, for we may have far to go, to be called up, to make compensation, to share nights; by so doing, the physical strength may be

kept up, and the child will be well taken care of even to the end.

The mother, I have said, owes her child her care, as she owed him her milk; but I maintain also that, while retaining the direction of affairs, she owes it to herself to accept aid.

The choice of a nurse is almost as delicate a matter as that of a wet-nurse. To express the whole complement of cares needed by a sick person, the English have the almost untranslatable word *nursing*. * * * * With them, the *nurse* follows a calling which seems, as regards the value of her services and her moral standing, superior to the office fulfilled with us by women of that trade, which, it must be conceded, has fallen very low in small communities. The first comer undertakes the task without any preparation, bringing to it only inexperience, prejudices, and pretensions. It is true that the employment of these mercenaries has become more rare since the various sisterhoods detailed to the care of the sick have begun to disseminate a service which experience makes efficient, and which the spirit of devotion and charity elevates to the grade of a sort of priesthood. These *religieuses* bring sound traditions from the corporations to which they belong; but it is desirable that they should receive a more complete practical instruction, in order to be fully equal to their task. They should have gone through the hospital service, or at least have made their novitiate there but it is also desirable that they should be indoctrinated by regular courses into the very delicate and complicated mission which they are to fulfil in families. The English, once more, show their practical spirit by the consideration with which they surround the very useful profession of *nurses*, and by the care with which eminent men enter upon their instruction. To make a mercenary of a nurse,

involves the risk of receiving only the services of a mercenary, it should be remembered.

As a physician should be carefully chosen and adhered to, so likewise with a nurse. The typical nurse should answer the following description: she should be of middle age, free from the unwieldiness of years and from the giddiness of youth; she should be scrupulously cleanly and careful; she should make as little noise as possible, *i. e.*, she should not be obtrusive or ostentatious; she should be free from any unsightliness of figure, from harshness of voice, and from any grossness of manner; she should speak only when spoken to, she should have nothing to do with medicine or with theories, and, sparing in her demands, she should make as little trouble as possible in the house; finally, she should be intelligent, for without intelligence nothing can be well done, not even friendly offices: that is the standard. * * * * It should be departed from as little as possible. If the ideal be found, it is still incumbent upon the mother to exercise supervision. It is humiliating for the ideal, but necessary to the child's safety.

The parents and nurse, then, the immediate participators, form the little force which is to do battle against the disease; but, alas, there is a rear-guard of camp-followers, who embarrass their proceedings and consume their time to no purpose. I allude to the visitors who, sympathizing to a greater or less degree, besiege the little patient's room, take possession of the house, and conduct themselves in exactly the same manner as the officious volunteers who smash things generally at a fire, throwing mirrors out of windows, and doing more real harm than the flames could have done. God forbid that I should speak ill of the purest and most human of all the sentiments, that of sympathy! Whoever does not feel it does not deserve to

inspire it; but there is a fussy mock sympathy which asserts itself, which seeks to be seen rather than to be of use; it should be met at the door, and suffered to leave its card. True sympathy, discreet and efficient, talks less and does more; it offers its services seriously and feelingly, and expects them to be accepted. That very true saying of the theologist Saint Martin, "Good makes no noise, noise does no good," is perfectly apposite to these two classes of visitors, well known and accurately distinguished in families. Moreover, the less a patient is molested, the better is he nursed, and the best method of showing our solicitude for him is, often, not to disturb him. How often have I seen agitation or increase of fever result from such importunities, which are used to gratify curiosity, and to enable the person to disseminate the latest news, rather than to attest a real feeling of solicitude.

A sick child's room should be inviolable: its door should be closed on all who are not needed; by shutting out noise and advice, a double benefit is obtained. The couch of a very sick person is not the place for buzzing flies: one or two relays of one true friend each (God grant them to you, and to me also) are amply sufficient.

CHAPTER XIII.

ORDINARY CARES AND DRESSINGS.

Cataplasmes, Dieu sait! les gens n'ont pas de honte.
De faire aller le mal toujours de pis en pis!

LA FONTAINE.

Easy things are the hardest to do well.

THUS far, I have endeavored to demonstrate to mothers that medicine properly so-called is not within their sphere, and that they have nothing to do with such a responsibility. I have now to teach them how to perform properly the limited, but useful, task which devolves upon them. Their action, comprised in the ordinary round of nursing, may become extremely serviceable, provided it is energetic and well-directed. I would have them become accomplished nurses, rather than indifferent physicians, as being more useful, if less aspiring. And let them not accuse me of depreciating their rôle; maternity ennobles everything, and I know of no more interesting sight than that of an intelligent young wife who, while possessing a high bent of mind and every elegant taste, yet sets herself bravely to work at those functions of which maternal vigilance alone can assure the proper performance, without seeking to shirk a single one of them. But this cannot be done without training; a course of long preparation is needed, together with a proper appreciation of their nature and importance.

The administering of medicines and baths, the application of poultices, sinapisms, leeches and blisters, consti-

tutes this domestic medicine; beyond this, all becomes doubtful and dangerous.

I.

In practice, physicians meet with two sorts of children: the one sort, trained by intelligent discipline, readily yield to the physician's injunctions, protesting only mildly and, as it were, from principle; the other sort, violent and irascible, and accustomed to have their own way in everything, compel us either to use violence to accomplish our purpose, or to follow an expectant course, which doubtless simplifies the physician's task and lessens his responsibility, but which signally jeopardizes the result aimed at. Need it be said that these two classes of children imply two classes of mothers—those who love their children wisely and for the children's sake, and those who love them for their own gratification, without thought for the future, yielding to the slightest frown of the little Jupiter in swaddles?

Man is not born so thoroughly good as it has pleased philosophers to suppose: from the beginning, he is a little being in whom everything is undoubtedly charming, even his turbulence, but who shows a marvellous predilection to play upon the soft-heartedness of people, and to redouble his demands in proportion to their indulgence. As long as the little despot remains well, his insubordination is laughed at, and the mother, ingeniously smoothing over his faults, reads in each one of them the promise of some noble attribute: obstinacy will become firmness, petulance energy, violence courage, etc.; but let disease come (and come it does but too often), and things will assume their real characters and proportions. The child makes his demands with a tyrannical impetuosity to which everything yields; he is opposed, he cries and gets into a

passion; his little face flushes, the veins of his forehead swell up, his breathing becomes hurried, and fever is kindled or increased. A new want leads to a fresh scene; he demands what is refused him, and refuses what is offered him; he takes no rest and permits no one else to take any, he takes advantage of the anxiety felt in his behalf, holds a whole house in check by his waywardness, and, fortified in a temporarily impregnable position, feels sure of impunity. A *spoiled child!* * * * how much there is in this word, the intense significance of which is blunted by its frequent use! what weaknesses to be expiated! what faults in the past! what difficulties in the present! what perils in the future! From such a chrysalis, only violent and passionate characters can be formed, impatient of every restraint, insisting that everybody shall yield before them, as the mother has already yielded, ruled by their own desires, and seeking to rule others thereby.

I leave to moralists the task of treating such of these manifestations as concern them, and content myself with showing mothers what will happen, in case of sickness, to children whom their blind indulgence has spoiled.

First of all, the medical examination of such children is either impracticable or deceptive. Knowing by instinct that the doctor brings them neither toys nor comfits, his appearance irritates them, and his mere look, even if he make it the sweetest possible, is sometimes sufficient to provoke a tempest. The mother caresses and supplicates; the cries are redoubled, and the impossibility of proceeding becomes all the greater. One day I was called to see a little girl of six years, attacked with a severe ophthalmia; the eyes were closed; it was possible that grave trouble existed behind the lids, and ocular examination was necessary. The child, borne in her moth-

er's arms, fell into a paroxysm of rage at sight of me, and I was forced to content myself with suppositions in regard to the nature of the disease, and with bitter reflections upon the ungrateful task prepared for the physician in the spoiling of children.

When, moreover, either directly or by dint of those prodigies of diplomacy of which mothers know the secret, we succeed in getting near these little sick hedgehogs, we throw them off their balance; their physiognomy, so mobile (and whose aspect is such a precious guide), changes of a sudden; the color, the temperature of the skin, the attitude, the look, the rhythm of the pulse and breathing, are all thrown into disorder, and we are forced to rest content with the necessarily incomplete information supplied by the mother or by those rare assistants whom the little tyrant suffers to approach him.

Then come desires to be eluded, desires as changeful as the clouds, and which, in the spirit of contradiction, are never by any chance found in the list of those which might safely be gratified. To take injudicious positions, and change them constantly; to change ten times within an hour from the bed to the chair, and from the chair to the arms; to seize upon a thing and refuse to let it go; to uncover himself every instant; to demand forbidden food, and to get into a rage when refused; to become feverish with such scenes constantly renewed, etc.; who does not know and has not seen this picture, slightly varied? The time is ill chosen for reform; tardy resolutions are formed, scarcely to be remembered when once the storm is past; the child is fatigued, the physician gets out of patience, and things go from bad to worse.

To refuse children, when they ask for what is unfit for them, is thoroughly practicable; we must oppose impassiveness (another fine-weather quality) to their demands;

irritated at first by unaccustomed resistance, they end by accepting the situation, and submitting with more or less grace. But, when it is necessary to make them take medicines which they dislike (and they dislike almost all), the difficulty is increased, since this is not a mere matter of refraining, but calls for positive action.

It cannot too often be repeated to mothers that docility in submitting to medical prescriptions should be cultivated early. Children should be broken in to it from the earliest months of life, they should be accustomed to allow themselves to be taken and examined by strangers, and even voluntarily seek such examination.

I scarcely know a more important item than that of accustoming children to show their throat. I have seen children of four or five years, trained to this manipulation by the repeated introduction of the finger or a spoon during health, open the mouth of their own accord when taken hold of by the chin, and submit spontaneously to an examination called for by a suspicion of diphtheria. The mother's finger is the proper instrument for this training, which may at any moment become so important. Introduced progressively to a greater and greater depth, it is finally perfectly tolerated, and its presence does not excite the retching which is such an inconvenience and impediment. We all know what an examination of an intractable child's throat is, when it is necessary to turn him back, irritated and terrified at the same time, upon his mother's knees, to hold his hands, and take advantage of his drawing in his breath in order to introduce the handle of a spoon. The veil of the palate and all the hindermost structures of the throat are then attacked with an involuntary spasm which interferes with an appreciation of their real condition, and the asphyxia-like coloration of the face, being communicated to the mucous membrane of the throat, precludes our recognizing its true appearance.

The examination of the chest also, so frequently necessary, is grievously hindered by indocility. I dare not say that every mother (on condition of not using it) should have a stethoscope, for the purpose of accustoming her children to the sight of that instrument, which commonly so works upon them, but the oddness of this precaution would be well compensated for by its utility. I am in the habit of leaving, as if by accident or inadvertence, my stethoscope upon the bed of a child whom I am going to auscultate; he seizes upon it, turns it this way and that, and finds that it has a harmless appearance, and, thanks to this initiation, often consents without crying to allow it to be applied to his chest. When practised during the ordinary state of respiration, auscultation renders truly valuable service, but the ear may be surprised, and even confused, by the sort of respiratory convulsion which arises under the influence of crying.

As regards percussion, I find it of service to have a pretence of it previously practised by the mother, who, careful to give it the semblance of play, thus prepares the child not to be frightened at a shock with which he is already acquainted.

The bath, which plays, or rather should play, such an every-day part in the treatment of children's diseases, is often such a punishment for them that we are obliged to forego that useful resource, or see its effects neutralised, if nothing worse, by the scenes which it excites. Here again there should be an initiation practised by mothers. Children who are bathed daily are accustomed to this exercise, and make no ado about it; those to whom this hygienic measure is applied more sparingly often have the utmost aversion for water, manifested by cries and violence at the sight of the bath. There are even cases in which the bath is impossible except upon condition

that the mother take one at the same time. Dr. West, an English physician eminently conversant with the diseases of children, and consequently with their habits, has pointed out how ill-advised it is to prepare a bath for an impressible child before his eyes and by the side of his bed. He follows with an uneasy glance the busy preparations, the steam which rises, etc., and feels called upon to protest when he is taken from his bed to be plunged into it. The bath should be brought in all prepared, covered with a blanket ; the child is laid upon the latter, which gradually sinks under his weight, and he finds himself in the water before he knows it. Like Astyanax with Hector's plume, at first he is afraid of it, but before long he is playing with it. The device of floating corks and boats is known to every mother, and all have experimental knowledge of its soothing power.

Sea-baths are commonly accepted with a very poor grace by children, and the shock of the swell, the noise of the breakers, the coldness of the water, and a sort of instinctive dread, excite in them an almost universal repugnance. Sudden immersion may do harm in sensitive children ; the bath should be represented to them as a sport, by taking them in the arms and making them jump at the moment when the swell comes, throwing water upon them and encouraging them to do the same; presently a big wave comes, and the child's fright is met with a burst of laughter, and tolerance is achieved.

Finally, in regard to medicines ; by whatever channel they are introduced into the system, in the eyes of chidren they are a punishment, an object of loathing, or at least unpleasant. An altogether special training of their will and their sensations is indispensable, if we do not wish to be met at a critical moment by the obstacle of unconquerable resistance.

And, first of all, I will point out to mothers the error of deception. A drug is presented to a child under the disguise of an article of cookery; he accepts it, but the result is a painful disturbance, vomiting for instance, the memory of which abides with him, and he obstinately resists any subsequent attempts. It is better to accustom him, by perfect frankness, to know what is expected of him. I have remarked that those families in which this system of *frankness* is carried out, are those in which the children the most readily take medicines.

Dr. West, in a very sensible little book (*How to Nurse Sick Children.* London, 1868, 3d ed., p. 64), has said in this connection:

"I look upon deceit as one of the most serious causes of difficulty met with in administering medicines to children. On the first occasion, we may succeed by telling a child that the medicine offered to him tastes good, when in truth it is detestable. But we shall fail the second time, and shall raise up a thousand difficulties for the future. If the medicine is absolutely necessary, and the child too young to be reasoned with, he must be compelled to take it, by a kindly display of authority, and his passing sense of injury will quickly be forgotten. If he is old enough, tell him that the medicine has been ordered for the purpose of doing him good, and, by making use of mild, but at the same time firm, words, you will succeed in getting him to take it, especially if, after all else fails, you tell him that he is a good child, that it is a pleasure to take care of him, and that you will not fail to tell the doctor of his good behavior. This truthfulness should be thorough-going; it should even prevent our saying to a child, 'You will soon be cured,' if the contrary really seems probable. When a child is convinced that we are telling him the truth, he feels confidence, we save ourselves much annoyance, and procure the poor little patient great consolation. Leeches had been prescribed for a little child of three years. The leecher, a worthy old man, said, in order to encourage him:—'My dear little fellow, it is nothing.' The child turned towards his

mother, and said :—'Mamma, is that true?' She hastened to answer no, but that she hoped that, for her sake, he would submit. The child became silent, and uttered not a cry nor a complaint during the operation."

Thus it is that intelligent mothers make docile children, and fit them to become brave men.

To persuade children that they cannot refuse a medicine designed to do them good, to make them prize it as something desirable, destined to cure them, to threaten not to let them have it unless they take it readily, are devices which very often succeed. A philosopher would say that in this respect men and children are alike. But I pass over that matter, as not being within my province. I know a very intelligent mother whose mind, as fertile in expedients as that of Ulysses, manages this resource with truly marvellous skill. A child of five years, perfectly aware of the horrors of castor oil, objected to a dose of that nauseous drug. A bet that it would take more time to swallow the mixture than to count ten was accepted and won. The device would not succeed equally well in all cases, but mothers are fertile in invention, and those who understand themselves will scarcely be at a loss.

I know no more detestable method than that of supplication. It is a prime-mover of revolt ; the child has an Indian's scent for the trail of weakness. You beseech, and he resists; if the case does not allow of relinquishment, your prayers end in a scene of violence. It is better to make the child feel at the outset the inflexibility of a decision which will not yield, and set about making him swallow the medicines in obedience to authority. I have seen spoiled children taken by surprise in this way, and yield immediately. They resist only so long as they see a chance of success ; but the person who has spoiled them is not the one to exercise this intimidation. She

has neither the moral courage nor the authority necessary to success.

Violence frightens children who are only exceptionally intractable, and may do them harm; it irritates spoiled children still more; we should not make words with them, nor yell at them, nor irritate them, but, after a few words, set about conquering their resistance by a calm and firm constraint.

It should not be forgotten that children have not a very delicate sense of taste, and that their palate accepts very disagreeable savors without disgust. Hence their docility is less meritorious and their resistance less excusable, from this point of view, than in the adult. Moreover, there are few medicines which cannot be presented to them under an agreeable form, and sugar, which is particularly seductive to children, so well cloaks for them the disagreeables of pharmacy that their resistance is unjustifiable. I do not remember to have seen a single child whose opposition to cod-liver oil it was impossible to overcome. In the matter of medicines, then, everything is easy with *well-disciplined* children.

Mothers should reflect that the gravity of a disease is doubled, to say the least, in a spoiled child, and that the obstacles raised by its indocility during convalescence often invest the latter with all the dangers of an added disease. Children should be accustomed to obey, and to allow themselves to be nursed; *it is often a question of life and death.*

It is not enough to be able to impose one's own will firmly upon sick children in order to make them do what is proper; it is also necessary to know how to set about the proper administration of the medicines prescribed by the physician.

The administration of the ordinary potions, such as an

emetic, a purgative, or cod-liver oil, constitutes the most common of these offices.

The administration of *potions* follows no other rule than that of strict obedience to the physician's directions in regard to the amount and the time of the doses, and an attentive observation, for the physician's information, of the effects attributable to the medicine.

Perhaps there is no remedy so much employed for children as *emetics;* there is scarcely any which is oftener useful. I do not mean that their use should not be regulated by wise moderation; but they answer to so many indications in diseases of the chest and of the digestive canal in children, that it is very rarely that they do not come into play.

Ipecac is the usual emetic for children; it has the advantage over tartar emetic of exciting less labored efforts, and of producing less commotion; its effects disappear more speedily, and it does not give rise to those symptoms of sinking and choleriform depression which tartar emetic sometimes produces; but, in this matter, as in so many others, what is unpleasant may prove useful, and there are cases, appreciable by the physician, in which tartar emetic would be more useful. However, when there appears to be urgent necessity for the administration of an emetic before the arrival of the physician, it will be better to choose ipecac.

The syrup of ipecac is of a reddish-brown color; on the other hand, the syrup of tartar emetic, sold in some pharmacies as syrup of ipecac, is colorless. It is therefore easy to distinguish them. Some twenty years ago, I saw grave results in an infant in consequence of this substitution. It has been advised never to use tartar emetic in children under one year, and I believe the advice well founded.

For young children, 30 grammes [nearly one ounce] is a sufficient dose of the syrup of ipecac; in older children, from two to six years, fifteen or twenty centigrammes [two or three grains] of the powder should be added to this quantity of syrup; beyond that age, the powder alone, in doses varying from sixty to eighty centigrammes [ten or twelve grains], is more convenient, and produces its effects with greater certainty.

There are practical details in the administration of emetics which mothers should know, to avoid failure of the emetic effect or its substitution by purging, which is not the same thing. This latter effect is produced when the emetic medicine is dissolved or suspended in too great a quantity of liquid, or given in doses too far apart. The child suffers at least all the pangs ordinarily produced by the emetic, followed by a more or less severe diarrhœa. The efforts of vomiting, which constitute the most useful action of this measure, are wanting, and the effects of the emetic are lost. Tartar emetic and ipecac are not so often well administered as one might suppose, and there are few persons who know how to go about it properly.

Whether we use the syrup or the powder, or a mixture of the two, there is every advantage in a small bulk, so that the whole may be taken within ten minutes, at the utmost, and in as small a quantity of liquid as possible. In this way, the impression upon the stomach is more sudden. As soon as the child becomes a little pale, or groans, or gags, it is well to take him on the knees. Besides the fact that this movement hastens the emetic effect, he is thus more comfortably situated and less likely to soil his clothes or the bed-coverings. Sometimes, indeed, it happens that vomiting takes place by a sort of explosion, without premonitory sickness, in children lying in bed, and the vomited matters may choke them,

to which accident uncleanliness is added. As soon as retching begins (the signal for the opening of the scene), give him a little lukewarm water, with a very little sugar, and make him take it at constantly shorter intervals. If there is much suffering (there are some children who vomit with difficulty), move them about a little, introduce the finger into the back part of the throat, and keep them sitting up; vomiting will soon ensue. In case vomiting seems doubtful, a foot-bath or a sinapism will hasten it.

After a rest of five minutes, the same measures may be repeated; they should, however, be desisted from as soon as the face regains color, and the cold sweat which bathed the forehead disappears; the stomach is no longer oppressed, and a few liquid stools will end the digestive disturbance.

Should the general prostration exceed a certain limit, or continue after the vomiting, it is easily overcome by the horizontal position, with the head somewhat inclined; rest, fanning the face, and the use of a little sweetened wine or Chartreuse, adding, if necessary, artificial heat by means of bottles of hot water and the application of a warm iron to the pit of the stomach. This complication is rare; indeed, children vomit with great ease, and it is not very uncommon to see them resume their play between two fits of vomiting. It is scarcely ever, save in cases of exceptional sensitiveness, and after the use of tartar emetic, that these consecutive effects are witnessed.

There is a notion, which should be combated, that an emetic should be administered only in the morning. Doubtless it is judicious to choose this time, the stomach being empty then, and the action of the medicine surer and less disturbing; but to wait for the next day would, in many cases, be a prejudicial exaggeration. Children

digest rapidly, and, provided three or four hours have elapsed since their last meal, we may fearlessly give ipecac or tartar emetic. I have sometimes, in urgent cases, seen emetics given a half an hour after dinner, and, with the exception of decreased energy of the vomitive effort, everything has gone on regularly. Of course, this condition should not be chosen, but neither, in case of need, should it be considered an absolute contra-indication.

We have already pointed out how carefully the vomited matters should be preserved, in order that the physician may examine them and draw indications from their nature and appearance.

The administration of *purgatives* usually develops no difficulties beyond the repugnance which they inspire and the intolerance which the stomach often manifests after their use. As regards refractoriness, it may be overcome by the moral means or artifices which I have already enumerated ; moreover, the number of *agreeable* or tasteless purgatives is now so considerable, that resistance may be avoided. When the purgative has been taken, the child should remain quiet and completely at rest for at least an hour, and any disposition to sleep should be encouraged. By means of this precaution, the purgative substance does not disturb the stomach, and reaches the bowels without difficulty, where its action should be expended. For the same reason, we should refrain from a too early administration of the cooling drinks, veal-broth, or herb-tea, upon the auxiliary action of which we may depend. They are really useful, but it is necessary to wait. If the child is not sick enough to remain in bed, it is of advantage that he should rise ; motion, indeed, hastens the action of the purgative. If severe colicky pains supervene, whether there have or have not been

evacuations, it is well to give a few cups of an aromatic infusion of orange leaves, aya-pana, anise-seed, etc. * * * * The application of a flannel to the bowels is necesary during the purgative action.

Purged children are generally put upon a too prolonged and rigorous diet; by so doing, they are exposed to flatulent colic, and sometimes the regular action of the purgative is interfered with. In many cases, the stools will not begin until some light food shall have been allowed. The English, notoriously given to purgatives, choose resinous substances, and mix them with their food.

I have often satisfied myself that a small quantity of calomel given to a child in the morning, and followed two hours subsequently by an ordinary breakfast, would produce in the course of the day a very mild and regular purgation, without nausea or griping. A cup of milk, given two hours after castor-oil, favors the action of the latter. We are too prone to think that there is an absolute incompatibility between food and certain medicines. On the contrary, the former sometimes constitute an efficient passport for the latter; they favor their action and *mitigate* it, as the ancients said.

This is especially true of *cod-liver oil*, which, properly speaking, is itself an aliment rather than a medicine. I think I ought to point out, incidentally, the incredible abuse which has been made of this substance, so useful in certain well-determined cases. The cod-liver-oil bottle is a fixture in all families where there are delicate children, and this habit of the Esquimaux is coming more and more into favor with us. Thus far, I have not concealed my dislike for routine medication, and this example deserves reproach to the highest degree. A medicine is useful when properly used, only as the complement of being noxious when improperly used. We must discrimi-

nate between cases, or rather we must *cause others so to discriminate*, which, however, people give little heed to. Notwithstanding this reproach to its abuse, the judicious use of cod-liver oil is of incontestable utility, but under certain conditions.

In the first place, it must be acceptable to the child. I have already stated that children have not an acute sense of taste, and that their resistance proceeds from ill-humor rather than from true repugnance. It is therefore easy to overcome it, either by firmness of command or by the allurement of a reward. In children, cod-liver oil may almost always be administered clear and without mixture; so that the dose is less bulky, and thus a sufficient quantity may be ingested. But, to get them to take their oil is not all; they should be placed in the most favorable condition for digesting it. Their stomach is wonderfully accommodating, it is true, but it should not be overtasked. An important precaution is that of never giving cod-liver oil except with the meals. Alone, it is difficult of digestion, but it undergoes it very easily with the food. I cannot too strongly insist upon the necessity of sustained exercise for the child during the use of this medicine, making him walk and subjecting him to a system of gymnastics. Cod-liver oil is well digested and assimilated only with the aid of free exposure to the air. The country is the best condiment. I am so convinced of this fact, that I recommend a suspension of the remedy upon certain days when, from one cause or another, the exercise of walking is impossible. *A fortiori*, these interruptions are necessary whenever by accident the oil is not well borne. It is useful only with the double proviso : (1) that it produces neither eructations nor disorders of digestion; (2) that it leaves the appetite unimpaired. It is a supplementary aliment ; what good can it do if it

interferes with alimentation? I have often seen mothers insist obstinately that their children should keep on taking cod-liver oil when they could no longer eat. Interruptions in the administration of the remedy do not interfere, for that matter, with its ultimate action; I may even say that they are useful, and would not advise more than a month of continuous administration: it may be discontinued for a fortnight and then resumed.

Another abuse to be pointed out consists in pushing the doses of cod-liver oil to too great an extent; more good is derived from one spoonful well borne than from four spoonfuls ill digested, and, as in so many other instances, the dose does not replace time. Finally, one last observation, which has its practical importance, is that of not giving cod-liver oil during hot weather. Fresh and reviving weather singularly favors its digestion; when it is hot, on the contrary, we feel an instinctive repugnance to fatty food, which should be respected.

II.

Baths constitute one of the most common and one of the most efficacious measures in the treatment of children's diseases. We thus possess a means of stimulating the functions of the skin, of assuaging the frequently exalted functional activity of the nervous system, and finally of introducing into the system certain medicines when other channels might prove difficult or impracticable. Baths are useful only when they are acceptable. Children should be accustomed to them at an early age, and their fears, if any, overcome by the subterfuges we have already indicated. It is very rarely that failure will result, and that they themselves will not come to enjoy a measure which at first frightened them by its strangeness.

The art of administering a bath properly cannot be

improvised: it is necessary to know how to go about it, that is to say, to have learned it.

The question of temperature is the most important, since different, and sometimes diametrically opposite, effects may be obtained, accordingly as the water is warmer or colder. The thermometer should be used, and in this instance the mother may venture upon the domain of physics. But all the science I ask of her will be limited to reading the figures upon a graduated scale, and there is nothing startling in that. As we have already said, a thermometer is indispensable in a sick chamber, in order that deceptive sensations of heat and cold may be rectified.

When the physician simply orders a bath, without any specification, he means a lukewarm bath of a temperature of between 20° and 26° Réaumur, or 25° and 32° centigrade [77° and 90° F.]. If these two scales are associated upon the same instrument, do not confound them with each other, but remember that, for a given temperature of the bath, Réaumur's thermometer shows a lower figure than does the centigrade. The temperature of from 25° to 32° centigrade [77° to 90° F.] is called *indifferent*, because, if the body be in a state of perfect repose, it produces no sensation; upon lowering it, a slight sensation of coolness is felt. It is very rarely that *hot* baths are prescribed, *i. e.*, of a temperature higher than 32° cent. [90° F.]; *cold* baths, or those below 25° cent. [77° F.], constitute a powerful but dangerous measure in the diseases of children, and their management should rest exclusively with the physician who prescribes them.

The application of the thermometer, and *à fortiori* the immersion of the child, should be preceded by a thorough mixture of the different layers of water, which tend to occupy different positions in accordance with their tempe-

rature. The use of the arm for this purpose has, moreover, the advantage of allowing a still better appreciation of the temperature. The latter constantly decreases by reason of radiation and evaporation; hence, very hot water should be added at short intervals in order to maintain the temperature. These additions should be made in very small quantities at a time and with a great deal of caution; a sudden and abundant stream of hot water may otherwise come in contact with the child and occasion burns.

The child's position in the bath is generally improper. To compel him to lie stretched upon his back for half or three-quarters of an hour, is, on the one hand, to ignore the disposition to change of attitude characteristic of childhood, and, on the other hand, in case the child is very young, to inspire him with a fear of submersion, as betrayed by his cries. When feebleness or illness prevents his sitting in the bath, he should be suspended in the water upon a cloth, both edges of which fold over the bath, and which may be immersed to any required depth. If, however, the child is able to sit, I know of no better bath-tub for young children than the ordinary sitz-bath, furnished with a linen bottom and with a pillow fixed by strings flush with the level of the water. The child is not easily fatigued in this position; he falls to playing, and the bath may be prolonged to any desired extent.

Baths constitute one of the most indispensable means of cleanliness, and it would be almost as absurd to attempt to rear children without water as without air. Apart from the general effects of repose and comfort produced by baths, they cleanse the skin, soak away the residue of perspiration which obstructs its pores, together with layers of effete epidermis, and at the same time favor sweating and that *respiration* through the skin which becomes

impossible when it is wrinkled and dirty. Frequent baths also afford an eminently efficient preventive of impure habits.

Baths made slightly *alkaline* are better than others, since they act upon the fatty matter which pure water makes no impression upon, and thus more thoroughly cleanse the skin. Every child should take one at least every month, in addition to the ordinary baths. These alkaline baths may be prepared in three ways, all equally simple, harmless, and within ordinary domestic resources: (1) with soap, (2) with ley, (3) with commercial soda.

Soap baths are prepared by dissolving a certain quantity of soap in the water, so as to give it a milky appearance. White domestic soap is employed; yellow soap, or palm soap, may be used instead. Doting mothers may substitute perfumed soaps, taking care to avoid those which are colored, so as not to soil the linen, and especially the red or rose-colored soaps, which are commonly colored with a mercurial preparation, vermilion. The Windsor soaps, particularly the white soap, containing nothing but the essences of caraway, thyme, rosemary, cassia, and cloves, are especially appropriate; they combine the stimulating effects of these essences with the solvent action of ordinary soap. * * * *

In the absence of soap, poor families may have the advantages of an alkaline bath without expense. For this purpose, boil a handful or two of wood-ashes, strain the ley through a rag, and add it to the bath.

Commercial soda, which is sold by all grocers, may also serve for the preparation of an alkaline bath. For a child's bath, from 25 to 50 grammes [six to twelve drachms] is the proper quantity.

Medicated baths, properly so-called, should be prescribed by physicians. I have therefore nothing to say

concerning them. At the same time, emollient baths, aromatic baths, and salt baths are established in domestic medicine, and cannot be withdrawn from it; so that a few hints in regard to them are necessary.

Emollient or soothing baths are prepared in various ways. The simplest are the best:

(1) The *bran bath* is prepared by boiling a pound of bran for a quarter of an hour, straining it, and adding it to the bath.

(2) The *starch bath* is made by mixing a half-pound of starch or potato-mash in two or three quarts of water, and adding the mixture to the bath. I often use ordinary farina instead of starch. The bath thus prepared is very unctuous, and leaves the skin in a very agreeably soft and supple condition.

(3) The *gelatine bath:* this is prepared by dissolving a quarter or half-pound of gelatine, or Flemish glue, in a quart of water. If it does not readily dissolve in tepid water, heat will accomplish it.

In like manner, soothing baths may be prepared with mallows, marsh-mallows, linden, etc. One or two quarts of milk in a bath-tubful of water make an emollient bath as efficacious as it is easily prepared.

Salt baths are very often employed in families for flabby, lymphatic children, of retarded or incomplete development, and, *à fortiori*, for scrofulous children; but these baths are commonly prepared in a ridiculous manner, the water being salted as if one were seasoning soup. Baths thus prepared are inefficient. At least 250 grammes [about eight ounces] of *crude salt* should be employed, and the same quantity of gelatine may be added with advantage. It is unnecessary to say that sea-water should be preferred when it can be obtained, and that, in default thereof, the pharmacists prepare saline solutions which, added to water, produce a sort of sea-water.

Aromatic baths are made in various ways.

There are to be found in the shops, under the name of *espèces aromatiques*, mixtures of odoriferous herbs (sage leaves, thyme, wild thyme, origanum, wormwood, and mint). It is well to procure these, when convenient; but, in the country, we may use approximative mixtures, disregarding a few omissions from the list of ingredients. 250 grammes [about eight ounces] of these aromatic herbs should be boiled for fifteen minutes in a closed vessel, and the water strained and added to the child's bath.

Some years ago a formula for aromatic baths was adopted in domestic practice; I refer to Pennès' aromatic baths, concerning which there has been, and is still, a good deal of noise made, and the original name of which (electro-chemical bath) sufficiently denoted its ambitious aims. Giving due weight to exaggeration, and remembering that these baths contain a great number of useless substances, it nevertheless appears that they are alkaline and aromatic baths, very convenient and agreeable, and that they are very efficacious in stimulating the skin and in promoting its functions.

They are prepared by dissolving in the water of the bath a quarter or half package of a mixture of salts impregnated with the essences of lavender, rosemary, and thyme. The physician increases the strength according to the effect produced, or until the bath occasions a more or less marked sensation of prickling in the skin, with heat and redness. It is indisputable that these baths, stripped of the marvellous properties attributed to them, are of real service in the treatment of pale, puny, and ill-conditioned children, especially during convalescence.

Whatever bath has been employed, strict precautions should be used to prevent the child from taking cold, and this is easily attained when it is understood. One neces-

sary precaution is that of wrapping him, while yet wet, in a woollen covering; having done this, and having secured the contact of this covering with every portion of the body, warm towels are insinuated under it, and the child is rapidly wiped. When he is sufficiently dried, he should be placed in his bed, which should be previously warmed.

After an emollient bath, he should be only moderately covered, and should be made to take a cup of linden or orange-leaf tea, have the curtains closed, and every source of noise suppressed, so that the sleep which follows a tepid bath, and which is so soothing and invigorating, may be fully established.

When, on the contrary, a stimulating (salt, aromatic) bath has been given, it should be followed, as soon as the skin is dry, by more or less energetic frictions. These practices, which were so highly esteemed by the ancients (who really abused them), have fallen among us into undeserved desuetude. It rests with mothers to aid in their restoration. When we think of the considerable quantity of blood which can be drawn to the skin by frictions, and of the timely derivation of sensibility which may be made in the same direction, we shall understand its practical importance. Hufeland has said, epigrammatically, that those grooms who rub and curry their horses harshly are better hygienists than we, and we merit the rude criticism.

These frictions are practised with the hand, previously well dried, with gloves of different materials (wool, hair, etc.), or with brushes. The flannel brushes made for the purpose accomplish the object very well, and should be found in every family. The electric brushes, so much vaunted some time ago, are no better than any others. For want of a flannel brush, an ordinary hair brush may be usefully employed, tempering the energy of the friction

according to its roughness. The frictions are made upon the bare skin, preferably upon either side of the spinal column, upon the chest, the loins, and the limbs. The art of the modern *aliptes* consists in gradually increasing the intensity of the friction, so that it shall produce its effects without occasioning pain; under its influence the skin should assume a uniform redness, without smarting or pain.

The frictions are either purely mechanical, or supplemented by the action of different vapors or liquids. The exposure of the brush to the fumes of benzoin, burned upon charcoal, is the most usual method for medicated friction; several varieties of stimulating liniments are also sometimes used in children. Rosen's liniment, composed of alcohol, essence of cloves, and oil of nutmeg, is one of those most frequently employed. Its ingredients are harmless, and its use cannot but be advantageous.

In case a bath has been given to excite sweating, we should favor its occurrence by appropriate drinks; an infusion of elder-flowers or violets, or hot sweetened wine and water, should be directed for children.

We will say nothing of fumigations and vapor baths. They are not within the domain of domestic medicine, and only physicians should prescribe and direct them. One word merely in regard to mustard baths, a powerful measure when skilfully employed, and which must be definitely included among the resources of treatment in children's diseases.

The *local mustard bath* is almost always employed under the form of a foot-bath. It is scarcely applicable for young children, in whom it is replaced by mustard plasters or mustard poultices, which do not necessitate moving the little patients, and which moreover are less formidable to them. A mustard foot-bath seems an easy

matter, and not to call for advice; yet it is nothing of the sort, and I have no fear of being contradicted when I assert that eight mustard foot-baths out of every ten fail in their effect. The mustard is often weak, or insufficient in quantity, the water is too warm, or it does not sufficiently cover the feet, etc.

I shall not now insist on the necessity of procuring mustard of good quality, as I shall presently have to speak of it in connection with sinapisms. There is a very deep-rooted prejudice, although long since exploded by science, that sinapisms work better the hotter the water is. This is an error; indeed, the active principle of the mustard is coagulated and decomposed by a high temperature, and thus neutralized. The water for mustard foot-baths should be merely tepid, nothing more. Finally, the water should cover the whole length of the legs, for which purpose a cylindrical vessel should be used, in order that the water may rise high when the feet are put into it. If at the same time we take the precaution of applying garters with moderate tightness, the skin will become red, the veins will swell out, and we shall have a very efficient foot-bath.

The general *mustard bath* is a very powerful means of stimulating the skin, of warming children, and of drawing a rash to the surface when its tardy appearance or its retrocession is accompanied by general symptoms of more or less gravity. I mention this bath here only because the physician who orders it may find it impossible to remain and superintend it himself. His directions will undoubtedly be full enough, but *verba volant*, and it is better that mothers should have a written guide to supply the wants of experience or any shortcoming of the memory, easily caused by trouble.

To prepare a mustard bath for a child, from 250 to 500

grammes [8 to 16 ounces] of freshly ground mustard should be used, accordingly as the bath is to contain 50 or 100 litres [12 or 24 gallons] of water. The mustard is to be wetted and done up in a rag, and then firmly squeezed or wrung under the water. The latter assumes a greenish color. The bath-tub is covered, to avoid irritation of the eyes, and the child is allowed to remain in the water until he complains of a sharp smarting. The coloration of the arms furnishes an index of the action of the mustard. The bath may be repeated two or three times a day.

The *envelope bath* is one of the most common practices in the treatment of children's diseases, and is appropriate under a variety of circumstances; but it is a detestable measure when not well managed. To prepare it, immerse a woollen blanket in a vessel containing a sufficient quantity of *very hot* water, withdraw it rapidly, and with the aid of an assistant, twist it forcibly, so as to wring out as much water as possible. Having previously spread out a dry blanket upon the bed, the child is to be quickly wrapped in the wet blanket, with the dry one outside of it, and an additional covering if required. Hot aromatic drinks should then be given at short intervals. It is very rarely that the skin does not yield and soon cover itself with abundant perspiration.

It is sometimes useful to render the envelope-bath more stimulating; we may then resort to the *mustard swathing.* This is done by mixing 500 grammes (about sixteen ounces) of mustard flour in a quart of water, enclosing the mixture in a rag, and expressing it in a pail of hot water. This water is then used to soak the enveloping blanket.

III.

Nothing is more common, in the treatment of sick

children, than for a *poultice* to be ordered; and nothing is rarer than to have the prescription well executed. To make a poultice thick enough to preserve its humidity, and yet not so excessively thick as to weigh heavily upon painful or inflamed spots; which shall be uniform throughout, so as to avoid painful traction in removing it; to apply it at a proper temperature; to prevent its becoming too cool, etc.—these requirements are rarely fulfilled, and yet without them this measure, which is of considerable value in the treatment of children's diseases, either fails in in its purpose or produces an effect the direct opposite of what was expected.

To teach mothers how to make a poultice may seem to many of them a work of supererogation; but I so often see this art, apparently so humble, but, like everything humble, really useful, badly practised, that I think it my right and my duty to teach it.

Linseed meal is the basis of almost all the domestic poultices, used to produce a sort of local bath, or to extinguish an inflammation. Nothing is more common than to see linseed meal produce considerable irritation of the skin, giving rise to redness and eruptions. And this sometimes happens even when the meal is fresh and not at all rancid. I have seen a person who could not prepare a linseed meal poultice without experiencing a severe irritation of the eyes and considerable swelling of the face. But such cases are exceptional. When irritation is produced, it must be attributed to the bad quality of the linseed meal employed. Very commonly the linseed is deprived of a great portion of its oil, which is then mixed with old ground linseed, with lignum vitæ sawdust, or with that of the pieces of wood which have been used to filter the oil, etc. Linseed meal, then, should always be procured from those apothecaries who can offer ample warrant

that this substance has been well prepared. It contains two principles which give it its emollient properties; the one, an oil, existing in the proportion of from 32 to 36 per cent., and the use of which in the arts is universally known, and the other, a mucilaginous substance, constituting about one-eighteenth of the whole, and which is found in flaxseed-tea, giving it that glutinous property which has led to its being used for fixing bandages. This mucilage retains the water in the poultice, and the oil, by resisting the ingress of air and the egress of the perspiration, helps to maintain a moderate degree of warmth, at the same time that, of itself, it produces a soothing or emollient effect.

The linseed meal poultice should be prepared by boiling. The very common practice of pouring hot water upon the linseed meal and making a mere mixture is bad; a poultice thus prepared is never homogeneous, and does not hold heat and moisture well. Instead of simple water, it is better to make use of the emollient decoctions of mallows, marsh-mallows, or flaxseed, or a mixture of milk and water, veal soup, etc., the emollient effects of these substances being thereby added to those of the linseed meal itself. The consistence to be given to the poultice is that of very thick pap; if it is too liquid, it gravitates to the lowest point, and the cloth which contains it, being bare in certain parts, adheres painfully to the skin; if it is too stiff, it soon dries and becomes hard, producing an opposite effect to the one expected.

The way of doing up the poultice is no less important. The paste is generally laid between two cloths; this is a bad practice; the water alone flows through the fabric, and may escape from beneath the edge, and give rise to chilliness. A well-made poultice does not adhere to the skin at all; besides, there is a way to prevent any such

adhesion, which consists in anointing the surface of the poultice with some fatty substance (oil of sweet almonds, olive oil, lard, or cocoa-butter). This increases the emollient action of the poultice, and allows of its being removed with the greatest ease. The spreading of a poultice is a very simple matter. The mass is placed upon a square piece of linen, firm enough to maintain the shape of the poultice after it is finished; take hold of one edge of the cloth, double it over on to the middle of the mass, and then roll it back, carrying the paste evenly with it; a narrow border is reserved for folding over. Proceed in this way with the three other edges, and the poultice is perfectly even. It is better, as I have already remarked, to apply it upon the bare skin; but if one prefers to interpose anything, let it be very light; a bit of gauze or tarlatan answers the purpose very well. In regard to the temperature of the poultice, the practical test of the sensation produced by laying it against the face or the back of the hand, is a sufficiently accurate indication. It should be more than lukewarm, since its heat tends to diminish from the moment of its application; once in place, it is well to cover its outer surface with oiled silk to prevent its cooling by evaporation; the interposition of a sheet of wadding between the oiled silk and the poultice is an additional means of preserving its temperature.

The means of holding the poultice in place vary according to the region of the body to which it is applied, as a mother's ingenuity will suggest; but its attachment should be firm, and a poultice which is to remain in position for a whole night should be stitched in place, to avoid the chance of displacement.

The soft part of bread, boiled in milk, or in infusion of mallows, borage, or elder-flowers, is often substituted for linseed meal in making poultices. Likewise, different

feculent substances may be used, particularly potatoes and rice, wheat or rye flour, etc., and, in the case of very small poultices, recourse is sometimes had to lily-bulbs, to the pulp of carrots, sweet apples, etc. All these poultices serve the purpose well, provided they are frequently changed, so as to avoid the alterations which they speedily undergo when subjected to contact with the secretions of the skin.

The poultices prepared with bran boiled in mucilaginous decoction are doubtless inferior to well-made poultices of linseed meal, but their emollient properties may be heightened by adding to the paste a certain quantity of oil or lard.

It would be advantageous to use, in making poultices, the heavy envelope paper which has one side made impermeable, or some material prepared for the purpose in a similar manner.

A new sort of poultice, known as Hamilton's poultice cloth, has recently made its appearance in commerce, and is prepared by simply wetting a dry mucilaginous fabric with hot water. It is applied to the part, and then covered with gold-beater's skin to prevent evaporation. I have used these poultices with advantage. They may be preserved indefinitely in a box, and are deserving of recognition in domestic pharmacy. They commend themselves by their cleanliness and the rapidity of their application.*

* An application known as the *oiled-silk jacket* is extensively used in New York, in the treatment of the catarrhal affections of children—its action being allied to that of a poultice. Instead of oiled-silk, oiled-muslin may be employed, or, as being equally efficient and very much cheaper, what is known as *gutta-percha tissue*. If the latter is used, it should be folded in three or four thicknesses. The jacket should envelop the body, from the root of the neck to the lower ribs, and should fit snug, *outside* the flannel shirt. It may be

IV.

Sinapisms are frequently used in medicine, and their application is entrusted to mothers, who should therefore understand the matter.

Ground mustard, which is used for making mustard poultices and sinapisms, is one of those substances which are adulterated with most pertinacious ingenuity. Thus, it is colored with different substances, such as yellow ochre; it is mixed with corn flour, with powdered rape oil-cake, with barley-meal, and with bran. It will easily be seen how culpable these frauds are; they impair the efficiency of this substance, and hinder the attainment of the end in view in their employment. But ground mustard is more often *damaged* than intentionally *sophisticated*, *i. e.*, having been ground for a long time, and exposed to the contact of damp air, it has lost its irritant principle, and become almost inert. It is therefore very important to procure the powder of the apothecaries, and not of the grocers, as is done every day. The former prepare it only as it is wanted, and keep their powder in closed vessels. The quality of ground mustard may be judged by the more or less sharp taste which it manifests upon the tongue after a minute or two; its yellow color (supposing it to be pure) is also presumptive evidence of activity, since it indicates very fine pulverization, and the separation of the bran-like particles which come from the outside of the grain. English mustard stands highest in this respect. At first, it might be supposed to be prepared from a differ-

temporarily removed, for the purpose of administering a bath, but, when it has fulfilled its purpose, it should not be suddenly laid aside. It is better to tear away a strip, an inch wide, from its lower border each day, until finally there is nothing of it left.—F. P. F.

ent variety of mustard, but it is known to owe its superiority to its fine pulverization. The addition of powdered turmeric or yellow ochre is designed to give ordinary ground mustard the appearance of the English article. Families living in the country should have a supply of English mustard in sealed bottles of 250 grammes [about half a pound], unless they prefer to keep a reserve of mustard grains, in a dry place, to be powdered in a mortar or, better still, a pepper-mill.

Mustard poultices are prepared by sprinkling ordinary *tepid* poultices with mustard ; a piece of very thin muslin is interposed, so as to prevent the escape of the mustard, and the consequent soiling of the clothes. If, on the other hand, sinapisms, properly so-called, be preferred, the mustard must be mixed with *tepid water*, and the paste spread upon linen as in making poultices. The ordinary practice of employing vinegar, far from increasing the action of the mustard, hinders its development. The same is true of boiling water. In fact, the irritating essence which is to redden the skin does not exist ready-formed in the mustard, but is developed on contact with water; vinegar and hot water hinder its formation. Sinapisms made with tepid water are, then, whatever might be supposed, infinitely more active than those made with vinegar.

Recently, sinapized paper has been used instead of sinapisms. It is sold in boxes of a dozen leaves, and appears to be prepared with very fine English mustard, glued to the surface of strong paper. This piece of paper is plunged into warm water for a moment, and then applied to the part, where it is retained until the irritant effect, which is very prompt, is produced. This sinapism is active; it is very cleanly, it keeps well, and I do not doubt that it will soon supersede the ordinary sina-

pism, which is somewhat troublesome to make, and which is of very variable activity. The ease with which its size or shape may be altered, by a few strokes of the scissors, is not the least of its advantages.

As sinapisms are generally used to draw the blood towards the extremities, they completely fail in their purpose when they redden the face. Nothing, indeed, is more common than to see children show signs of congestion of the head in consequence of the pain produced by sinapisms or mustard foot-baths, and that too without anger or indocility. The mother, then, should watch the child's face after applying a sinapism; if it shows a persistent flush, the measure is acting badly, and should be unhesitatingly suspended. Here, as is so often the case in the medical treatment of children, we have to distinguish a moral from a physical influence, and intelligent mothers excel in this delicate analysis.

In case of a child plunged in insensibility, or suffering with delirium, or whose brain is considerably oppressed, it is important not to keep a sinapism applied to one particular spot longer than fifteen or twenty minutes at the farthest; sensation being in abeyance, there is less indication of its effects. Instances are not wanting of children, and even adults, who, having worn a sinapism upon the same point for whole nights, have presented an ulceration or even extensive gangrene of the skin. I have seen a case in which an accident of this sort jeopardized the life of a patient who had happily passed the dangers of severe typhoid fever. Under other circumstances, the child knows how to attest too severe a pain, and it is then better to disseminate the irritation of the skin by an increased number of sinapisms, than to exasperate the child and cause congestion of his head by making him cry. Mustard paper is more active than

ordinary sinapisms, and its application should be still less prolonged.

V.

Would it be an exaggeration to assert that blisters have, on the whole, done more harm than good during the two thousand years since the Bithynian Asclepiades, as it is said, invented the practice? I do not think so. It is true of this measure, undoubtedly useful as it is, as of so many others,—that the bad effects of abuse pay dearly for the benefits of use, and God knows how this is abused! Popular medicine is very much inclined to the humoral pathology, which made all diseases consist in an alteration, a displacement, or a lack of proportion of the humors, and it has yielded to the blister a devotion which time does not cool, and which good sense will have difficulty in subduing. I know localities in which it would be difficult to find an adult who has not paid tribute to cantharides at some time in his life. Every arm bears the marks of one or more old blisters, sometimes unpleasantly apparent in the form of indelible scars. Every sort of ailment calls for this routine practice: a somewhat prolonged catarrh, difficult dentition, the itch, glandular enlargements, etc. Physicians themselves fall victims unawares to this pressure of exacting routine, and, as the proceeding is comparatively harmless, and as its omission would be charged with everything unpleasant which might happen within two or three years, if not longer, they feel obliged to yield their judgment to the *furcæ caudinæ* of this routine. Happily for them, and unhappily for rational medicine, they are spared the annoyance of the struggle, as, instead of having recourse to advice authorized by knowledge and fortified by judgment, people give one sole and only solution to every problem—a

blister, which simplifies matters, but scarcely mends them. Would that blisters could never be dispensed by apothecaries except on prescription, like other medicines. This demand is all the more just, since cantharides, being poisonous, come within the restrictions which the law imposes upon traffic in dangerous substances. There is no such thing as *domestic medicine*, I have repeated in every line of this book; there is a *domestic hygiene*, which mothers do not understand, and which they ought to learn; there are *domestic cares*, a knowledge of which should form part of the plan of their education: beyond this, all is useless and perilous. Precept, counsel, and law should join efforts to cast out this intrusive medicine, which every year kills more persons, by *commission* or *omission*, than legitimate medicine cures. Physicians are accused of looking out for their own interests; yes, and we love humanity too much to give them up. Strange destiny, that of physicians, who ply the ungracious craft of saving people in spite of themselves, and hear the interest which they feel in them reproached as a bid for prestige and influence! oh, vulgarity! * * * But, to return to blisters.

In the first place, mothers should know that blisters are not so absolutely harmless as is commonly supposed; this fact once learned, they will employ this means with less prodigality. There are conditions of the general health which render a blister dangerous, prone to ulcerate, to become gangrenous even, to assume a bad character, to spread inordinately, to provoke eczematous eruptions, difficult to cure, involving a whole limb, and sometimes even becoming general, producing engorgement or abscess of the axillary glands. There are also conditions of the atmosphere which render them dangerous; for example, that disposition to erysipelatous diseases which often pre-

vails in a town or in a hospital, and which renders every irritation of the skin dangerous. I remember with sadness a case of death by erysipelas supervening in a vigorous man, in the full strength of youth and health, who, having entered the hospital during my service with a simple bronchitis, showed a blister which had been needlessly inflicted upon him. The hospital *air* was bad, erysipelas was prevailing there, the blistered surface ulcerated, a low grade of erysipelas broke out on the chest, delirium and nervous manifestations supervened, and the poor man died in consequence of a useless blister. The *Imparziale*, a Florence journal, recently relates a case of death occurring in a child in consequence of a neglected blister. Were the infant martyrology of the blister compiled, the number of victims which it has made and still makes every day would be frightful. It has been asked if certain dropsies dependent on kidney diseases might not have been created *de novo* by the abuse of blisters or cantharidal ointments in children. The reproach lacks verification, but there is nothing very improbable in it. It is well known that fly-blisters modify the urinary secretion, especially in children, and that a more or less severe inflammation of the bladder, with retention of urine, may result from their application. We shall see presently that this accident, slight in comparison with the dangers we have pointed out above, may be prevented by a few simple precautions.

Blisters which are kept up for a length of time, especially if suppuration is strongly stimulated, cause deep ulceration of the skin, and, when healed, leave very unsightly scars, white, shining, seamed, sometimes even furrowed (especially upon the front of the chest), crossed by bridles, elevated, sometimes painful, prone to congestion, and constituting a real deformity or inconvenience.

Emaciation of the arm below the blister must also be mentioned. Suppuration, which makes away with a portion of the nutrient fluids, and the necessary compression by the subsequent dressings, contribute to this unpleasant result. I have seen arms a third less in size than their fellows, the deformity being due to no other cause. Finally, we should take into consideration the comparative immobility to which the left arm is condemned (it is the left arm which routine commonly chooses for the application of blisters) and the still greater immobility of this member, with the consequences which may result to the erectness of the form, that may arise from the practice alluded to.

Not that blisters should be utterly renounced. On similar grounds, we should have to renounce a multitude of medical and surgical measures, because there is no one of them which is always and absolutely harmless, and to the account of which we may not attribute a certain number of grave accidents or even deaths; but *useless blisters* should be renounced, that is to say, blisters not ordered by the physician. It is, indeed, remarkable that blisters which might have been dispensed with are often the ones which turn out the worst; the same has been observed in regard to chloroform, which has thus far shown itself especially dangerous in cases where it was not needed.

Neither should we lose sight of the unpleasant results which sometimes follow the suppression of a blister which was useless at the time of its application, but which time has changed to a sort of servitude. A blister is applied, and the functions arrange themselves to accommodate the unwelcome visitor; it gradually takes it place in the person's economy, and a new balance, in which it participates, is speedily established. When it is suppressed, one runs

certain risks to health, exaggerated risks, I must say, and which a few simple measures will commonly prevent.

The correct management of a blister is the touchstone of maternal nursing, which prides itself on intelligence. This complex art is composed of several elements: (1) the application of the blister, (2) its removal, (3) its first dressing, (4) subsequent dressings, (5) the measures demanded by certain accidents of which it may be the seat, (6) its suppression.

The *application* of a blister is a simple enough thing, thanks to the English blistering plaster, which has constituted a very useful advance in the matter of certainty of action and in cleanliness. The back of the plaster is divided into centimètres [nearly four-tenths of an inch], which allows of accurately conforming the size of the blister to the physician's orders. We should definitively give up those extemporized blisters made with powdered cantharides, water, and vinegar, or some unguent capable of adhering to the surface of a piece of diachylon; their action is variable, and, moreover, in their travels over the surface of the skin, they soil it, together with the bedclothes, with cantharides powder, and expose to bladder complications. Nothing but routine maintains their use in certain localities. It has been observed that camphor corrects the action of cantharides upon the bladder, and, in the case of children, we should never omit to sprinkle camphor upon blisters; this practice is above all indispensable in the case of those large flying blisters which are applied to the back of the chest in certain acute diseases of the lungs.

There is a method of depositing a very thin and uniform layer of camphor upon the surface of blisters, pointed out about twenty years ago by M. Vée, which is employed by pharmacists, and which may be done at home, if it has

been omitted : I speak of a solution of camphor in ether. Both these substances figure in domestic pharmacy. Take a large piece of camphor, and gradually pour ether over it, using no more than is required to dissolve the camphor. Sprinkle the blister with a few drops of this solution ; the ether will evaporate, leaving the camphor deposited as an impalpable powder. The plaster thus prepared is placed upon a square piece of diachylon with the four corners deeply slit, and then placed in position. A bandage, fitted to the particular part of the body, completes the application. In very young children, I have found it answer well to apply a piece of Fayard's paper over the blister. This paper, being very thin, adheres perfectly to the skin, and effectually prevents displacement.

Is it necessary to subject the skin to any preparation before applying a blister ? It is commonly rubbed with vinegar, so as to produce a little redness ; strong dry friction, or the previous application of a piece of sinapized paper for a short time, would answer the same purpose. These proceedings have the advantage of reducing the length of time during which the plaster will have to remain on the skin, and consequently of diminishing the chances of the cantharides acting upon the bladder.

Some physicians, among others Bretonneau, Trousseau, and the English physician, Davis, bearing in mind this latter accident, have thought to avoid it by interposing a little shield of blotting-paper, soaked in oil, between the blister and the skin. As the active principle of the cantharides dissolves with great facility in this fluid, the blister acts more promptly, and does not require to be kept applied more than a few hours. In his trials made at La Charité, Trousseau saw only one case, among two hundred children, in which the bladder was affected. Davis has recommended that the blister be kept on only three or four

hours ; a full blister does not form in that length of time, but the epidermis is loosened and soon rises. The application of a poultice hastens this result. The precaution of the oiled paper is simple, and mothers had better not omit it.

The child's sensations will generally give notice that the blister is beginning to take effect: he will complain, toss about in bed, and become fretful, and it will then be necessary to resort to various subterfuges to prevent him from removing the blister, and to assure ourselves that it is not displaced. This pain, however, soon begins to subside, when the blister has for the most part exhausted its local effect, and we must begin to think of *removing* it. When it has produced its typical effects, we find, over an extent of surface corresponding to the size of the plaster, a great glistening, yellowish bleb, hanging like a pocket, and filled with a lemon-colored fluid; the cuticle is detached throughout, if the blister has fully succeeded. But this does not often happen; more commonly we find blebs of the size of a pea or a nut, separated from each other by intervening portions of cuticle still adherent. If the plaster has remained in place a sufficient length of time, we may conclude that the subsequent dressings will procure a thorough separation of the epidermis ; but that is rather an inconvenience. The pouch is to be opened at its lowest part by clipping it with a pair of scissors, and the whole of the fluid will flow out on to a piece of old linen made ready to receive it ; if it only partially empties itself, the cut should be repeated at as many places and as often as may be necessary.

There is a little matter of some mystery which nurses often encounter, and which it may be well to mention. A large bleb, apparently well formed, but everywhere rounded, and having a dull white color is sometimes seen ; and,

on opening it with the scissors, little or no fluid flows out. This is gelatinous and thick, although transparent, and seems to be deposited in little cells or sacs. In such a case, we must make a great number of little cuts, and let the escape of the liquid take its own course. Such blisters do not commonly succeed well, their dressing is difficult, and it is better to let them dry up than to endeavor to keep them open. The conditions which bring about this result have not been ascertained; to me it seems probable that they attach to the patient himself, rather than to the quality of the cantharides employed.

If things go on regularly, the choice has to be made, according to the physician's directions, between a flying blister and keeping the first blister open.

In case of a flying blister, care should be taken not to cut the cuticle more than is necessary for the evacuation of the contained fluid; this done, the skin is allowed to fall back nicely into position, and the blister is to be treated like a burn, that is to say, white cotton wadding, as soft as possible, is to be applied to its surface. The wadding is to be held in place by the means already described, and, upon removing it after a few days, the blister will be found to have healed. This measure is infinitely better than all those fatty substances (cerate, cold-cream, butter, etc.) which are commonly employed, and which often fail to prevent suppuration.

If, on the contrary, it is designed to establish a blister to be kept open (and these are the ones that are especially abused), the course to be pursued is different. If the bleb is not well formed, it will be sufficient to apply a bread and milk poultice; if it is complete, open the pouch with scissors of rather large size and rounded at the point, and, after the liquid has escaped, insert the blunt blade of the scissors into this opening, and cut away the whole loose

skin by carrying the scissors around the circumference. If the child is very intractable, the removal of the epidermis may be deferred until the second dressing; otherwise, especially if the blister is small, it may be seized by one end and removed by a single motion. A piece of linen or tissue paper smeared with cerate is applied to the denuded surface.

The use of any irritating ointment would be improper for the first day. The second dressing is done on the succeeding day. Sometimes the contact of a foreign body, paper or linen, with the denuded skin is sufficient to bring on suppuration. If it should not occur, or if the blister should seem to be drying up, suppurative ointments or papers should be employed. The choice among them is not a matter of indifference. We may use preparations containing cantharides, or those containing mezereon. Albespeyres' epispastic paper is a cantharidal paper; it is sold in numbered boxes; number one is the feeblest, and is the only one which need be used for young children. A little shield of it is cut out, applied to the raw surface, and covered with one or more pieces of tissue paper folded to several thicknesses. The immediate covering is coated with cold cream, and it is well to spread it with the finger all around the epispastic paper, to prevent any painful traction in the subsequent dressing. It is more prudent, in all cases, to resort to mezereon ointment, which is in every way harmless, or even to mezereon epispastic papers; but they should be procured of an upright pharmacist, for too often a preparation containing cantharides is sold under the name of mezereon epispastic pommade. The mezereon paper of the Codex is prepared with wax, spermaceti, olive oil, Venice turpentine, and ethereal extract of mezereon. It is made of two different degrees of strength, number one being the weaker. The mezereon

epispastic pommade is an analogous preparation, but less convenient in its use and more liable to be abused.

The use of cantharidal cerate for the purpose of keeping a blister open may lead to persistent irritation of the bladder, the symptoms of which are often very difficult to recognize in young children. I question also if it may not, in them, lead to bad habits by means of a purely physical excitation.

The early dressings having been attended to, the suppuration is to be regulated; this is accomplished by methodical dressings and by substituting, according to circumstances, a paper of one number for one of another, ringing the changes as experience teaches.

The linen bands with which it was formerly customary to bind children's arms, in order to keep their blisters in place, had the fault of slipping upon the soft and yielding arm, necessitating a constantly increasing constriction, capable of dwarfing and deforming the arm. *Serre-bras* were a great improvement, and rubber bands (when sufficiently soft) produce a gentle and equable compression. I do not hesitate to affirm that, when these means of dressing are impracticable, open blisters must be renounced.

When a blister is doing well, its surface is uniform, and of a pale rose color; the pus which it furnishes is thick and creamy; there is no marked marginal irritation, the blistered surface remains stationary, neither increasing nor diminishing; there is no tendency to dry up, nor to ulcerate; its sensitiveness is moderate, and, if it be well taken care of, it does not bleed when gently wiped.

When the surface becomes red, shining, and somewhat dry, and, instead of furnishing laudable pus, yields only a thin, grayish fluid, the blister is said to be *inflamed*. This condition is to be overcome by the application of emollient poultices. The use of suppurative papers would only

aggravate the trouble ; they should not be resumed until suppuration is reëstablished and the blister has returned to its ordinary condition.

When a blister is increasing in size, it may be controlled by covering it with a piece of tissue paper spread with cerate, having a hole cut in it of the size of the original blister. The borders, being no longer in contact with an irritant pus charged with the materials of the epispastic paper, cicatrize, and the blister resumes its normal dimensions. If, on the contrary, it tends to dry up at the borders, a piece of epispastic paper number two is to be cut out of the size and shape of the surface which is drying, and to the centre a little shield of number one is applied ; the blister is thus very soon brought back to its original size.

One of the most common inconveniences of blisters is that of producing intolerable itching. Children scratch with a sort of fury, the blood flows beneath their fingers, the dressings are disordered, and the blister assumes a bad look. This itching is often owing to a bad condition of the blister, consequent on neglect of cleanliness, but it sometimes also depends on an herpetic or dartrous disposition in the children. In such cases, we see dry or moist eruptions, sometimes very extensive, set up around the blister. The itching may deprive the children of sleep, and make them grow thin, nervous, and irritable. If very obstinate, the blister, with the physician's concurrence, should be suppressed, and other measures resorted to instead.

Nothing is more common than to see blisters become covered with a white, leathery layer. Poultices are indicated in such cases; but if this condition persists, and if at the same time the child is rather puny, the case is beyond maternal management, and there is need of a com-

bination of measures which can be well carried out only under the physician's direction. His interference is all the more necessary when the blister ulcerates, or becomes fungous, or when it assumes in places a livid or blackish coloration, the prelude to gangrene. It will be easily understood that the mother who should wait for this state of things would be very imprudent.

When an open blister has been decided to be useless, whether from the cessation of the trouble which justified its application, or from fear that habit may have blunted its action, it is to be suppressed.

Generally, it is sufficient to diminish gradually the activity of the epispastic papers, to dry up the suppuration and to effect cicatrization. But a more serious difficulty arises. Is it dangerous to suppress an old blister? How should we go about it? Is any special regimen necessary?

Popular opinion has long since pronounced upon all these questions. It exaggerates the ill effects of suppressing blisters, and freely charges it with any derangement of health which may follow. This is a pure exaggeration, founded, as I have said, upon that doctrine of the migration of humors which finds so much favor with the public; on the other hand, it is repugnant to sound medical ideas to think that a suppurating surface existing for several years can be suddenly dried up without some inconvenience. It should be accomplished in a certain way: there is no occasion for haste, the suppuration should be slowly diminished, and a few gentle purgatives and baths employed. It is generally believed that we should wait until spring to suppress an old blister, but this notion does not seem to have any solid foundation.

I will remark that I am not fond of open blisters for children; I confine myself to the flying blister. The interdiction of the former is all the more appropriate for the

lower classes, in whom blisters are badly taken care of, and who ordinarily exceed every medical prescription in inflicting them upon their children. In hospitals, as well as in crowded apartments, blisters are prone to degenerate, and are therefore more troublesome. I prefer, also, to change blisters frequently. Three blisters, each kept open for a month, appear to me infinitely more effective than one blister kept open for three months, and they have the additional advantage of leaving no scar.

Finally, I will point out two other methods of applying blisters: mezereon bark and ammonia. A piece of mezereon bark, moistened with vinegar, is applied to the skin, previously reddened by frictions with vinegar, and kept in place for twenty-four or thirty-six hours. At the end of that time, a vesication is obtained, but it is circumscribed, painful, slow, and kept up with difficulty. Mezereon blisters, therefore, should be laid aside. The application of mezereon in substance, to maintain the suppuration of ordinary blisters, is a common practice in certain provinces, but only routine keeps it alive.

I have laid down for myself the rule of not communicating to mothers an idea or a measure which they can abuse; nevertheless there are cases in which they are isolated, sojourning in the country, for example, when, not being able to obtain cantharides, it may yet be necessary to establish a blister. Water of ammonia, which is kept in every house for domestic purposes, such as cleansing fabrics of grease, will answer the purpose very well, provided it be obtained of an apothecary, that it is of a strength of 25 per cent., and that it is kept in a ground-stoppered bottle. Two very simple and easily-applied methods have been employed for establishing blisters with ammonia: that of the watch-glass and that of the coin.

In the former, a little cotton is placed in a watch-glass,

and moistened with ammonia ; the glass is then turned down upon the skin and held there with the finger for ten or twelve minutes, the time usually necessary for producing vesication. A rose-colored areola, produced at the periphery of the glass, indicates that the epidermis is affected, and a little rough friction with a rag will suffice to detach it.

A small wineglass, made shallow by the insertion of some object, would answer the same purpose. The coin process consists in cutting two thick discs of tinder of the size of a five-franc piece ; they are then applied to this coin, saturated with ammonia, and the little apparatus reversed upon the skin. Vesication is produced as with the watch-glass. If the pressure causes a little of the ammonia to trickle down, it is to be wiped away with cotton, so that the irritant action of the ammonia may not extend too far.

Mothers have doubtless heard of boiling water as a means of raising blisters. This process is severe, and it is not free from dangers ; only the experienced hand of the physician can use it to advantage.

VI.

Little things are generally the most difficult things to do well, and that mother who would resent a doubt of her perfect knowledge of how to prepare a sinapism or apply leeches correctly, would, if put to the proof, be obliged to confess her incompetence. I shall close this chapter with a few details in regard to the application of leeches.

This domestic art is being lost with a rapidity proportionate to the rarity of its exercise. Thirty years ago this measure was abused, to-day it is fallen into undeserved discredit ; but leading minds are beginning to understand

that the reaction against extravagance has itself taken an extravagant form, and I foresee that the time is not far distant when the moderate use of leeches will be resumed in the medical treatment of children. It is well, therefore, that mothers should understand how to manage them, and especially that they should recognize the fact that they have something to learn in regard to the matter. Experience cannot be improvised, but it grows more rapidly if preceded by preparatory information.

The physician orders leeches for a child, he determines their number, indicates the points for their application, and confides the rest to the mother or the assistants, who accomplish it more or less properly. The selection of the leeches to be employed is generally left to them, and it should not be forgotten that small leeches only should be chosen for young children ; indeed, the larger they are, the greater wound is made by their jaws, and one prone to give rise to hæmorrhage which is sometimes troublesome.

Leeches purchased anew should not have been previously used ; this is a condition of their easy application and also of safety. Leeches applied to certain patients a short time previously may become the means of transmitting diseases. Facts have been published which should make us careful in this respect. Leeches are possessed of a remarkably sluggish digestion, and they require four or five months to empty their digestive canal of the blood with which they have gorged themselves. If a suspected leech be squeezed with the fingers, proceeding from the large to the small extremity of its body, it will be made to emit a certain quantity of blood, if it has been used some time previously, and the fraud will be revealed. It has also been recommended, as a test, to sprinkle them lightly with fine salt, or immerse them in a mixture of

two-thirds wine and one-third water; the contact of these irritating substances seems to cause them acute pain; they become affected with disordered movements, and emit blood: the test having been made, they are washed several times, and their condition suffers no detriment. It should be remembered, however, that fresh leeches, kept together in one jar, may suck each other (leeches have red blood), and consequently furnish a little blood on either of these tests. So, also, leeches are often caught by means of living animals, made to enter the ponds for the purpose, or by pieces of meat thrown into the water. Finally, dealers in leeches sometimes gorge them, in order to give them a good appearance, and to increase their size and especially their weight. Any leech, then, which can be made to eject blood should be laid aside; the energy of suction is diminished, and so a sufficient abstraction of blood cannot be counted upon.

The olive leech, the green leech, and the black leech are all of equal value, the first being most commonly employed. It presents six longitudinal stripes upon the back. There are two kinds of leeches, sometimes met with in commerce, that should be declined: the so-called horse leech, of which there are two varieties, the one light-colored, the other brown, and they are obtained in the west of France. They may be known by a yellow stripe on either side of the body. They are a very bad sort of leech, taking hold with difficulty, and satisfied with a very small quantity of blood. This should be understood in families to prevent disappointment.

The brilliant appearance of leeches, their bright colors, their agile movements, the rapidity with which they double themselves into a bunch and form the *olive*, as the technical phrase has it, the absence of cast-off cuticle in the bottle containing them, and the eagerness with

which they take hold upon the hand, are indications of their health and appetite, and consequently of their value. Leeches of good quality should draw from four to five times their weight of blood. When leeches are shedding their skin, they are less lively, and are in a depressed condition which unfits them for their office.

Good leeches having been obtained, it only remains to apply them upon the part indicated by the physician. A very common practice in domestic medicine consists in subjecting leeches to a sort of preparation, by taking them out of the water an hour or two before their application, and keeping them rolled up in a dry rag; the idea being, to make them hungry and more ready to bite. In reality, it is better to apply them immediately upon removing them from the bottle. The practice of rubbing them somewhat briskly against a rag is likewise injudicious. Vigorous and hungry leeches bite better if applied to the skin as soon as they are taken from the water. In some countries, they are previously immersed in liquids of one sort or another; in England, beer is used; in France, sometimes wine and water; but these practices are not very rational, as they scarcely improve ill-conditioned leeches, and their adoption shows, *ipso facto*, that a poor selection has been made.

Some preparation of the part to which the leeches are to be applied is of more importance. These annelida are extremely sensitive to odors and savors, and odorous effluvia or acid secretions from the skin, or the previous application of fragrant medicines, is enough to make them refuse to bite, or to do so tardily.

A scrupulous cleansing of the part with tepid water, and its careful drying with cloths, constitutes the simplest and best preparation of the skin. When the part is very dry, vigorous friction, with the back of the hand or with

a brush, attracts the blood to it, and inclines the leeches to bite. With the same view, the previous application of a sinapism has been advised, but it would be difficult to cleanse the part immediately of the essential oil of mustard with which it would be impregnated; so that there is no advantage in this practice. The device of smearing a little sugar and water or milk upon the part has no justification, either in reason or in experience. Even if water slightly sweetened were considered a liquid favorable for the preservation of leeches, it would be strange if a flavor so foreign to their ordinary food could entice them to any great extent. Blood naturally suits their taste much better, and, as an appetizer, the blood of some animal may be employed, or a drop of blood from the prick of a pin. In Italy and in England, people make use of a feather plucked from the wing of a living pigeon, touching it to the spot where it is wished to make the leech bite. In general, friction of the skin with dry flannel or a stiff brush is amply sufficient, especially in children, whose skin is delicate and very full of blood.

The method of applying leeches varies a great deal, every neighborhood, not to say every house, having its own particular mode, which, of course, it considers as superior to all others. The simplest consists in applying the leech held in a dry rag, slight compression with the hand being sufficient to induce the leech to bite. One half of a sour apple with the interior removed, also constitutes an excellent means. I have seen a potato employed in the same way, and with equal success. A glass turned upside down, and of a proper size, is often used; but it has the disadvantage of allowing the leech to retreat to the bottom of the glass, and thus escape contact with the skin; it also places him in an irrespirable atmosphere, and his half-asphyxiated condition is not very conducive to the

accomplishment of the physiological act expected of him. An excellent proceeding, which cannot be too highly recommended, consists in making a cylinder of sticking-plaster, notched at the end to the depth of two or three centimètres [an inch or more]; the straps thus formed serving to hold the cylinder perpendicular to the skin. The leeches are introduced at the other extremity, and, when they are in contact with the skin, they are kept there by a slight compression to cause the walls of the cylinder to adhere together above them. In this way leeches are made to bite very promptly.

When it is desired to make a small number of leeches take hold upon a very limited surface, we may use a playing-card made into a little cylinder. A pencil may be thrust into the cylinder from time to time, to detach such leeches as may have fixed themselves to its walls, and to keep them upon the skin. Sometimes they are applied with the hand, being held by their large end—a tedious and faulty proceeding, less effective than the last.

When leeches have entered the teeth of their three jaws in the skin, we see their bodies undulate with the creeping movements indicative of regular suction, and they gradually become distended with the blood swallowed. These movements, very active and rapid at first, soon become slower, and the leeches, for a longer or shorter time before dropping off, show incomplete undulations succeeding each other at longer intervals upon the surface; sometimes indeed they remain motionless, and sleep, as it is commonly said. This immobility is owing to digestive torpor or debility; in the one case, it precedes for a short time the spontaneous fall of the leeches; in the other, it hinders them from fulfilling their office, and they have to be stimulated. Friction with a rag, or the action of a small quantity of salt, restores their activity; but

this stimulation should not be carried too far, for fear of making the leeches drop off prematurely. They usually maintain their hold for three-quarters of an hour or an hour. If, at the end of this time, they are sufficiently swollen and remain motionless, their fall may be induced by gently raising their posterior extremity, by rubbing them, or by sprinkling them with a few grains of pepper or tobacco; but no violence should be used, for fear of leaving in the little wounds their jaws, with the 180 or more teeth with which they are provided, thus provoking painful irritation, and occasionally even abscess. Upon close examination of a leech-bite, we find that it has the form of a little triangle, the three sides of which are curved and correspond to the three jaws. The size of these wounds depends, of course, upon the size of the leech; they remain open in consequence of the retraction of the skin, until inflammatory swelling tends to close them. A greater or less flow of blood follows the fall of the leeches; it is sometimes very abundant in feeble children, and, instead of successive drops, there is a continuous little stream. In such cases, the bite is the seat of slight pulsations, each one of which expels a little blood; it might be said that small arteries were opened. This is especially observed in the neighborhood of joints, when leeches have been applied for inflammation seated in them.

The duration of this consecutive flow varies a good deal. Commonly it tends to stop spontaneously, when the bite is neither bathed nor kept in contact with warm moisture; but yet it is not rare to see each bite yield a sort of little hæmorrhage, which needs to be stopped by appropriate measures.

If we wish to promote the flow of blood, we should bathe the bites with a sponge soaked in hot water, and not in tepid water, as is commonly done, and not without risk

of the child's taking cold. The application of a very soft and warm linseed-meal poultice answers the same purpose, and with less annoyance to either patient or nurse. It should be renewed every half-hour until it is thought proper to stop the flow. In the case of a limb, the foot, for instance, we may employ a local tepid bath. A general bath would be useful after the application of leeches to other regions, provided there were no contra-indications.

In many cases, the physician determines the length of time that the leech-bites should flow; but this determination cannot be considered as absolute; it depends, indeed, upon the size of the leeches, upon conditions of the blood favoring or hindering the flow, and also upon the effect of loss of blood upon the patient. This is easily estimated. The state of the pulse, the strength, and the appearance of the face constitute a very significant array of indications, which an intelligent mother should be able to appreciate. If, even after a moderate flow of blood, there is a manifest disposition to faintness, pallor of the face, or yawning, or if the pulse is noticeably weaker, the bleeding should be stopped, the little patient being laid down with his head somewhat lowered, so as to favor a flow of blood to the head and prevent fainting, at the same time employing stimulation of various sorts, such as frictions or blows with the palm of the hand, smelling-salts, aromatic vinegar, etc.

The art of staying leech-bites is none of the easiest; witness the multiplicity of means which have been commended for attaining the end. There are, indeed, few physicians who have not, particularly in children, themselves had to contend against hæmorrhages of this sort. Mothers should know the usual proceedings which may arrest them, and how to apply them properly.

Very often, the cessation of the measures which have

been employed to make the blood flow will suffice to arrest it; the blood coagulates, forming a little clot which plugs the wound, and that is all; but very often, also, the flow becomes a hæmorrhage, and it is necessary to interfere.

There are children who *bleed* easily, whose blood flows in abundance from the slightest prick, who bleed from the nose, who have hæmorrhage following the extraction of a tooth, etc. These children are generally remarkable for their fine, white skin, and for the abundant network of veins traversing it; they are decided blonds, and are apt to be of the lymphatic and nervous temperament; and they manifest this peculiarity—that their skin shows a blue coloration upon the slightest contusion, in consequence of the extravasation of blood. Leeches should be small and very few in number, when applied to children; the consecutive flow will supply any deficiency of draught. If they have been previously leeched, the difficulty experienced in stopping the bleeding will furnish a noteworthy point of information.

There are certain parts of the body which present particular difficulty in the arrest of bleeding. They are those where the skin is very thin, and especially those where motion opens the lips of the wound. The sides are examples; at every movement of respiration, the wound gapes, and the formation of a clot is very difficult. I have several times had to contend against very troublesome hæmorrhage in children for whom I had ordered leeches to the sides for pleurisy. Upon the front and back of the chest there is less mobility, and this accident is more rare. Leeches applied to the neck, in children, also very often produce hæmorrhage which it is troublesome to master. At the pit of the stomach, leech-bites are equally difficult to stay, but for another reason—here the difficulty depends upon the lack of a solid point of support for the application of pressure to the bites.

It is usual to employ tinder to stop the bleeding, but this simple measure is efficient only when well applied. Success depends both upon the quality of the tinder and upon the way in which it is employed. Good tinder has become scarce since the general use of friction matches has led to its abandonment. It is well always to have on hand a stock of it of good quality, that is to say, thick, soft, spongy, and capable of ready absorption. How often have I observed the uselessness of dry, thin, hard tinder, having somewhat the texture and appearance of leather! In the absence of good tinder, cotton or scraped lint will answer the purpose very well. Hold a pledget of one of these substances in the right hand, and apply it quickly, after having wiped the little wound with a cloth held in the left hand; if you wait till another drop of blood has appeared, it is all in vain. When the tinder has been applied (and it is important to use pieces no larger than a 50 centime piece [about the size of a dime]), it should be held firmly with the finger or by an assistant. If blood flows beneath it, it will soon be perceived by the sensation of warmth, moisture, and softness felt by the finger, and the proceeding must be repeated. Cobweb, in domestic medicine, enjoys a repute which I consider to be well founded, and I have often seen it stop troublesome bleeding from leech-bites. The process is simple, and the application very easy; it is only necessary to cover it with a bit of tinder, and compress it with the finger. A little ball of mashed paper, also, is sometimes used with advantage. Common cotton and scraped lint answer the same purpose. All these substances constitute a sort of felt, in the meshes of which the blood is infiltrated, coagulating, and thus blocking up the leech-bite; but this result is attained only by assisting the action of these means by somewhat prolonged pressure with the finger, and especially by apply-

ing a bit of tinder, or a wad of lint or cotton, upon each bite, carefully and rapidly dried at the moment. How often do we see persistent hæmorrhage due merely to the faulty application of tinder in large sheets, soon loosened by the blood!

In ordinary cases, these measures against the flow of blood are amply sufficient; but sometimes it is necessary to add others—powders or liquids capable of arresting hæmorrhage. The powders of lycopodium, rice, starch, gum arabic, and punk are readily accessible, and should be tried, with the precautions above mentioned; in regard to liquids, none are as good as the perchloride of iron, and it should always be obtained of the apothecary at the same time with the leeches, whenever these are to be applied to children. The chances of success with this application are promoted in the following manner: little pellets of very soft tinder, or, better, of scraped lint, are soaked in perchloride of iron; a piece of a match is then soaked in the same liquid; the little wound is then dried, and a little of the liquid inserted into it before the blood reappears; the soaked pellet is placed upon the wound, and over it another (dry) pellet, and they are held in place for at least ten minutes by an assistant. It is very rare that, upon thus treating each wound in succession, the hæmorrhage is not mastered. When the pledgets have remained dry a certain length of time, and the flow has ceased, a light compressing bandage may be applied, to prevent friction or the movements of the part displacing the wads of tinder or cotton.*

In some cases, it has been found successful, when time was to be gained, to insert one end of a bit of wax-wicking into the little wound, and flatten the other into the

* The solution of the *subsulphate* (instead of the perchloride) of iron is more efficient in stopping hæmorrhage.—F. P. F.

form of a nail-head. With a little yellow wax, such as is used for waxing thread or floors, the same result may be attained, but this wax should be mixed with a little olive oil, in order to soften it sufficiently.

A very simple proceeding, and one which answers well when the skin is sufficiently lax for its application, consists in splitting a bit of wood, and using it like a clothes-pin, grasping with it a fold of skin, including the bite. Unfortunately, this measure is applicable only to a small number of points.

When the hæmorrhage persists, and the child is weakened and seems likely to faint, the physician must be sent for at once, or rather this should have been done as soon as exceptional difficulty in stopping the bleeding became probable. There are measures which he ought to apply personally; but his presence may be delayed or not to be obtained, as in the country, for instance, and it is important not to lose time. Under these circumstances, two very effective measures present themselves—cauterization, and suture. To practise cauterization, an iron wire, of the size of a small curtain-rod, is used; it is heated to redness,* the blood is wiped away, and the hot iron is quickly carried into the little wound, and immediately a pledget of scraped lint soaked in chloride of iron is applied, and kept in place with the finger.

If there were nothing at hand which might serve for this cauterization (a large knitting-needle would answer, in an extremity), it would be necessary to resort to a point of suture. To accomplish it, pinch up a fold of skin, holding one end of it, and getting the other end held by an assistant; transfix this fold with a pin, immediately below the leech-bite; this done, let go of the skin, throw a loop of thread around one end of the pin, and then around the

* It should be heated to *whiteness*.—F. P. F.

other end, and repeat this twining several times, crossing the thread in the middle so as to form a sort of *figure-of-eight*. The wound is thus effectually closed, and no bleeding from leech-bites can resist this device when properly applied. We hasten to add, that it is rarely necessary, and should be reserved for those cases in which the danger seems urgent.

A very important precaution consists in applying leeches, when possible, only in the morning, so that prolonged observation may be practicable. The cases of death (and they are somewhat numerous) which have occurred in consequence of hæmorrhage from leech-bites, have really been owing to lack of watchfulness. Bites which had been thought to have stopped bleeding have continued to ooze during the night, and in the morning the little patients have been found bathed in blood, exsanguinated and exhausted, and it has been found impossible to restore them, notwithstanding the arrest of the hæmorrhage. In the daytime, on the contrary, their appearance may be watched, and danger avoided.

Physicians (and still less mothers) are not unaware that the scars from leech-bites are indelible, and this fact should be kept in view in determining the points to which the leeches are to be applied. For that matter, there are skins which are particularly prone to show this to an exaggerated degree, and I have seen leech-bites produce prominent, teat-like scars, constituting a very disagreeable-looking seam. In little girls, especially, we should avoid those parts which fashion decrees to be left bare. It is very rarely that the necessity of the case is so pressing as not to allow of some accommodation in this respect.

The application of leeches to young children is a somewhat troublesome proceeding, and one which usually meets with vigorous resistance. It is still more awkward

when the patients see the leeches, which induce fright as well as repugnance. It is easy to spare them the sight, by choosing a point away from their view, or by some artifice.

As the price of leeches is rather high, it is of importance to endeavor to preserve them, and those who have no further need of them can give them to the poor. To preserve them, they should first be made to disgorge. Ashes and snuff, commonly used, are dangerous to the leeches; salt, as we have before remarked, is certainly better, and it is convenient to resort to it or to immersion in wine and water. Leeches take from eight months to a year to digest a single meal, but artificial emptying is almost always resorted to, so that they may be used again much sooner. Ebrard's process best answers the purpose: it consists in immersing the leeches in a mixture of equal parts of wine and water; a drop of blood is soon seen to escape from them; each leech is then to be taken by its large end between the thumb and forefinger of the left hand, and, with the thumb and finger of the other hand, gentle and methodical compression towards the head is to be practised. With each of these movements, a certain amount of blood escapes. When the operation is finished, the leeches are placed in a bottle of water with a large mouth closed with a coarse rag or a piece of paper riddled with pinholes. The water should be changed often enough to keep it perfectly limpid, and any leeches which may die should be immediately removed. Thus treated, leeches may be reapplied successfully at the end of fifteen or twenty days. It should be remembered that leeches are very susceptible to heat and to odors. Tobacco-smoke, particularly, is very prejudicial to them.

CHAPTER XIV.

THE DIET OF SICK CHILDREN.

La bouche est le médecin de l'estomac.

GERMAN PROVERB.

Simplicité, mesure, opportunité.

To direct the diet of children during disease or convalescence, is a matter of no small importance and of no slight difficulty. Doubtless, a judicious physician, entertaining broad views of hygiene, and not restricting his action to the narrow domain of drugs, will not omit to acquaint the mother with the selection, quantity, and mode of preparation of the food proper for the little patient; but there is a vast difference between prescribing and executing, and it is especially in the latter that a mother's sagacity, prudence and skill come into play. In another book,* I have dwelt at some length upon the diet of sick children, but I was addressing physicians exclusively. My present purpose is different; I am speaking to mothers, and I shall not lead them to overstep their sphere in this, any more than in other matters. It belongs to the physician to indicate the diet, to the mother to carry his prescriptions into effect. All safety lies in this distribution of parts, every danger in its neglect.

We will first speak of drinks; food properly so-called will follow.

* *Hygiène Alimentaire des Malades, des Convalescents, et des Valétudinaires*, 2d ed., Paris, 1867.

I.

Drinks constitute, almost exclusively, the nourishment of children during the acute stage of diseases, and they always play an important part in their diet. Some details, therefore, may be entered into in regard to them.

We will say, first of all, that the quantity of drink which should be allowed, during twenty-four hours, for a sick child, should be carefully determined. The physician should decide the matter, for it is a delicate and important point. Indeed, by too great abundance or restriction in the matter of drink, very favorable or very dangerous changes may be occasioned. The mother should therefore avoid this responsibility, and demand definite instructions.

If she is directed to reduce the quantity of drink to the lowest point, she should employ some artifice to allay thirst and satisfy the patient's wants. Slices of acid fruit, particularly oranges and pomegranates, and the English sour *bonbons* known as *drops*, flavored with different fruits, allay the child's craving and give him patience. Coolness of the room is indispensable in such cases. The drinks, being taken in small quantities at a time, may without harm be given cold.

West has made a judicious remark upon this subject, viz., that drink should be given to children only from *very small*, but *full*, glasses. The contents of a nut-shell will satisfy them, if overflowing, while a large glass, half full, would leave them unhappy. This is very true and very well put.

When, on the other hand, it is sought to make the stomach tolerate a large quantity of liquid, we should take care to give the drink very frequently, but little at a time, and to measure accurately the quantity consumed in the

twenty-four hours. By thus dividing the drinks and approximating them, we may succeed in getting down a large quantity without disturbing the stomach, for that is the real stumbling-block.

The temperature of drinks is also important. Tepid, warm or cold drinks are differently borne, and produce different effects. One need not be a physician to know, for example, that hot drinks tend towards the skin, and induce sweating, while, on the contrary, cold drinks increase the urinary secretion, and tepid drinks clog, induce nausea, and thus tend to a moist condition of the skin.

A very deeply-rooted prejudice forbids the use of cold drinks in diseases accompanied with *fever* and with *cough*, and needlessly punishes the poor patients. I have always fought this routine, and now willingly give it a passing shot.

I was saying that cold drinks embarrass or arrest the favorable movement of expansion to which there is a tendency in many acute diseases. So they do, but I refer only to drinks taken in abundance; allowed by mouthfuls, or better still by spoonfuls, they produce no ill effect, but distract and refresh the patient, and spare him that sensation of heat in the mouth and throat which sometimes gives rise to more suffering than the disease itself. "Like Tantalus, devoured by fever, the throat and mouth, parched by their rapid breathing, as well as by the thickened mucous secretions of the parts, loudly demand relief, and not an increase of their suffering by gorging with hot drinks." (*Hyg. aliment. des Malades*, 2d ed., p. 21).

When it is advisable to promote moisture of the surface, I prescribe warm drinks, and, every fifteen minutes, a spoonful of cold water (the most grateful of all drinks to a person in fever). When no such indication exists, I

allow the exclusive use of cold drinks, but with the injunction to use them only by spoonfuls. The mingling of this small quantity of drink with the burning fluids of the mouth, cools it, and, upon arriving at the stomach, it has already attained a temperature of upwards of 30° cent. [86° F.], which can do no harm.

All my patients have a glass of cold water upon their table at night; I have yet to see any harm in the practice, and feverish patients know how it soothes them. It is more difficult to uproot a prejudice than to found an empire, and I dare not hope that the one in question will disappear. How much sleeplessness is due to nothing but thirst, "that cross of hapless patients," as a physician of the eighteenth century called it, without any exaggeration!

There is another piece of routine, which must also be combated; I refer to the abuse of ptisans. They form the groundwork of domestic medicine, and their employment, although usually regulated by mere commonplace routine, would be perfectly harmless, if this sort of expectant treatment did not, as I have already remarked, too often imprudently delay recourse to a more efficacious course. The English make fun of our mania for ptisans, and they are not altogether wrong, but they verge on exaggeration when they affirm that the choice of ptisans is almost a matter of indifference, and that generally they might better be omitted. A great many of them are perfectly useless, but some are moderately nutritious, or aid the action of the major medicines, and these it is proper to preserve.

The number of ptisans is considerable. To the already ample list of ptisans which have been admitted into the official code of French medicines, must be added those of the domestic formulary, which vulgar medicine opposes

to the former, and from which it draws, with a confidence worthy of a better cause, its more than dubious *depuratives* and its usually equivocal *refrigerants*. These hap-hazard dogmas are imposed upon the physician in spite of himself, and, if he should happen to doubt the *heating* properties of rice-tea and orange-flower water, to question if the diuretic action of pellitory were not somewhat apocryphal, if elder-flowers or violets ever started a drop of sweat from the skin, if the ptisan of Provence cane assists at all in setting up the secretion of milk—he would most certainly be acting in a very praiseworthy spirit of independence, but also he would run the risk of shocking his patients, and, what is worse, of seeing them resort to some other physician. At first, we pass with the impatience of a rebellious spirit beneath these *furcæ Caudinæ* of prejudice, but little by little, with the aid of habit, and by being forced to prescribe them, we end by persuading ourselves that these ptisans really possess the properties which everybody attributes to them.

Perhaps the *farinaceous* ptisans are the commonest of all employed in the treatment of children. Being somewhat nutritious, they mitigate the rigors of a strict diet, and they stimulate the skin by their volume and their temperature, while destitute of any proper stimulant action. *Barley* is the most classical of these ptisans, and the almost exclusive use made of it by the father of medicine explains the esteem it enjoys, and shields it against too strict an investigation. Next come *oats*, which possess the properties of barley, with a marked influence upon the urine, and the *meal* of which is nutritious and agreeable to the taste. Then *rice*, which constitutes one of the commonest of the ptisans, and to which tradition awards, perhaps with too much fervor, the reputation of being an astringent and of controlling diarrhœa. Medical science

finds it more convenient to wear the yoke of this tradition than to verify its legitimacy. It is said that the rice ptisan is *innocent;* alas! I cannot too often repeat it, such means belong to the category of those I most distrust. In domestic medicine there is no abuse of belladonna, opium, or nux vomica; but what abuse there is of those little traitorous measures which have a very harmless appearance, but which squander time! Four days of rice-water, and then the doctor; such is the formula of the domestic treatment of diarrhœa. That is sometimes harmless, but most frequently the opportunity of cure, or at least of rapid cure, is lost. Diarrhœa is a serious matter with children, and one which often, especially during the epidemic prevalence of dysentery, and during the hot months of the year, demands prompt and well-devised treatment. Quince syrup and rice-water have their martyrology, mothers should remember.

Ptisans of mallow and marsh-mallow, toast-water, and the light gelatinous broths complete this group of the ordinary ptisans.

The *acidulous* ptisans are generally taken cold. The lemonade sort, and wine-and-water, are the ones most employed.

Lemonade is the most common. It is prepared by squeezing lemon-juice into cold or hot water, sweetened to the taste. To give lemonade an agreeable aroma, rub the rind of the lemon with the lumps of sugar which are to be used for sweetening the lemonade, peel the lemons, cut them into slices, and pour boiling water over them; in this way the acidity and the perfume of the lemon are preserved, without its bitterness.

Orangeade is less acid, and consequently more harmless than that of the lemon, and it has the additional advantage of keeping the bowels free.

Wine-and-water is in itself a sort of lemonade, the acidity of which is mitigated by the other vinous principles. It is the best drink which can be given to patients. It might almost replace all others, but none could take its place. Its strength is easily graduated, and, according to the proportion of wine, it is either simply refreshing or supporting; finally, the diversity of wines which may enter into its composition contributes to vary its effects as well as its flavor. The addition of sugar and essence of lemon, sometimes also of a little of the juice of this fruit, or its combination with seltzer-water, conspire to render wine-and-water at the same time more agreeable and more refreshing. There is scarcely a child who will not seek this drink with avidity, finding in it an agreeable contrast to the sugared drinks ordinarily given him.

As regards the *bitter ptisans*, very few of them will be taken by children; their taste is repugnant to them, and a great deal of sugar, itself objectionable, will scarcely overcome their unwillingness. The bitter syrups of quinine and orange-peel are almost the only ones employed in the medicine of childhood; I generally mix them with wine-and-water, and they are readily accepted in this guise. As to beer, which is cool, slightly nutritious, refreshing, and stimulating to the kidneys, it is an excellent drink when diluted with water; but children, at least among us, are not in the habit of taking it during health, and it is needless to think of teaching them the habit during sickness.

Milk, and the analogous drinks, play a considerable part in the dietary of children confined to bed by illness. By analogous drinks, I mean the emulsions of almonds, and mulled egg.

Milk mixed with other drinks makes them readily accepted; it gives them, indeed, the false appearance of

food, and thus humors the child's demands. Moreover, by gradually decreasing the proportion of water, we may effect a methodical progression towards the diet of convalescence. This aliment has the immense advantage of being *complete*, that is to say, of being capable, in case of necessity, of subserving all the purposes of the repair and maintenance of the organism, and, what is more, it nourishes without burdening the stomach or exciting the circulation, which double advantage is very appreciable in most febrile diseases.

Finally, the *aromatic ptisans* complete the enumeration; they are prepared by infusing aromatic herbs, or by diluting distilled waters. They stimulate the stomach, calm the nervous system, excite moderate perspiration, and favor the occurrence of sleep; moreover, it is indisputable that they have the property of diminishing the malaise accompanying that very common occurrence in children, the excessive development of gas in the stomach or bowels.

The mere mention of this group will call to mind substances with which every house is provided: *linden*, anise-seed, *balm-mint* or balm-gentle, *orange* leaves or flowers, etc.

Orange-flower water has one foot in the kitchen and the other in the nursery; it is the commonest calmative, and it must be said that it answers to a multitude of indications in the treatment of young children, and may properly be called their *valerian*. The reproach of being *heating* is utterly without justification. It is a harmless medicine, and, in order to produce any effect, needs to be given in very large doses. The addition of two or three dessert-spoonfuls of orange-flower water to a litre [rather less than a quart] of warm *eau sucrée*, makes an agreeable ptisan, which *does not become thick* (an important point),

and which generally produces a condition of very beneficial quietude.

I need not say that *tea* should be banished from the formulary of children's ptisans. The nervous system is too predominant in them to bear the strain of such drinks. If orange-flower water is the *valerian* of children, anise is their *tea*, and it is a very advantageous substitute in the digestive troubles which, in the adult, are combated by the latter drink.

It will be seen that the list of drinks which serve to refresh sick children is very full. The physician should always prescribe both their nature, their temperature, and their quantity; it is an important matter, which should not be delegated to any one else, and, if I have enumerated the principal ptisans, it is because the physician is rarely called at the outset of disease, and the mother almost always has to direct the early treatment.

Everything is different in the medical treatment of children; indocility complicates everything, and it is sometimes a laborious task to make them drink.

If they are very young and will still suck, an ordinary cruet or medicine bottle, in the neck of which a fine oblong piece of sponge has been firmly fixed, and kept in a state of scrupulous cleanliness, answers the purpose very well. If they are larger, the drinking-cup or spoon will replace the bottle. In all cases in which it is impracticable to raise the child up, on account of difficult breathing or embarrassed circulation, also when he is in a torpid condition, as in typhoid fever, his drinks should be pressed out for him by means of a sponge. A bulb-pointed tube of soft rubber, expelling the liquid under the pressure of the hand, and pierced at the bulb after the manner of a watering-pot, would be highly useful under such circumstances.

But, under certain conditions, young children obstinately refuse to drink; medicines, ptisans, and food are all declined, and neither prayers nor threats are of any avail against their resistance. We temporize, and meanwhile the instinct of repair becomes dulled in the child, and starvation threatens, to say nothing of the harm which may happen to him from not taking the medicines prescribed. There is no room to hesitate, he must be forced to drink. Holding the nose closed, and forcibly inserting liquids into the mouth the moment it is opened for breath, is a precarious proceeding; an incomplete result is attained, at the expense of a very painful struggle. The process of injections through the nose has rendered so great service in cases of this sort in young children, that I have thought it my duty to describe it in all its details elsewhere (see *Hygiène aliment. des mal., convalesc., et des valetud.*, 2d ed., p. 290). As it should be employed, the first time at least, by the physician himself, I will not further refer to it.

II.

I have now to sketch the rules of diet suitable for sick children. I suppose, of course, that the physician has not delegated to the mother or assistants the most important of his functions, and that he has recognized the fact that the prescription and regulation of the food is of as great importance as the prescription and regulation of active medicines. The mother, therefore, should question him upon this point, obtain precise instructions, and follow them to the letter. The time and number of the meals, the selection of articles of food, the form in which they are the most acceptable, the mode of preparation as affecting their digestibility, the nature and amount of the condiments which accompany them, etc.: these are so

many important questions *which constitute a part of the treatment*, and the *very delicate* solution of which belongs to the physician.

In point of fact, it must be confessed that the part we play in this matter is very much belittled, to the detriment of the patient's real interests. In this miserable result, the fault is partly attributable to physicians and partly to families—to physicians, in that they have busied themselves too exclusively with medication; to families, in that they have lost their sense of the importance of those little details which, when put together, lead to great results in medicine. This imprudent *vicariousness* should be ended, and physicians should resume, authoritatively and ably, the control of their patients' diet. Therefore, I need not teach a mother that which others ought to know better than she, and for her own profit; I must content myself with a general outline, which shall enable her to comprehend the importance of diet in disease, and lead her to interpret the physician's directions intelligently.

The pretence of giving a *patient* strength by making him eat is very common; you cannot give the *patient* strength by following this routine practice, *but you may give strength to the disease*, which is not quite the same thing. How often do we hear it said: "The child's strength is failing; it is nothing to be wondered at, as he eats nothing." It would fail still faster, were these imprudent suggestions acceded to. The problem of restoring strength is not so simple as it is believed to be in families. The vulgar saying, "the fever gives nourishment," is certainly not justified by physiology, for it is, on the contrary, a very potent source of waste, but it blunts the manifestations of appetite, which happily do not show themselves in the midst of the tumult of fever; moreover, it is accompanied by a sort of undue nervous excitement,

which confers a false strength, and masks the need of repair. I do not pretend, far from it, that there is no occasion for food in fevers, especially in fevers of long continuance. This matter of diet has, in recent years, been the subject of very important research, and it is now sufficiently cleared up; but what I do maintain is, that it is a question of the very greatest delicacy, which embarrasses educated physicians themselves, and consequently could not be authoritatively solved in the family. Therefore, my first recommendation to mothers is: *Do not give food, even light food, in a condition of fever, unless the physician has recognized its propriety.*

One other piece of advice, not less salutary, is, to restrict the treatment of an indisposition to diet alone. It almost always suffices for a cure, and, if the attack must end in a disease, the ground has been cleared, the physician's action facilitated, and future complications rendered less probable. The number of cases of disease which can be arrested in children by instituting a preventive diet, is almost incredible. In them, the digestive functions are in a state of activity proportionate to the need felt by their system for repair and growth, and they are invariably involved in any attack of disease. What, then, is more natural and more salutary than to give them rest at the outset of an indisposition; but what is less commonly practised? The bad habit of making children eat at the table is the stumbling-block of dietetic prescriptions, and it becomes impossible to resist the solicitations which we ourselves have provoked, so to speak. When, on the other hand, they do not see the table, we may, with a little perseverance and the well-known devices, succeed in smoothing down for them the austerities of diet, while obtaining its benefits for them. Second precept: *Treat indisposition by diet, and begin it as soon as may be.*

If certain articles of food have been allowed, the manner in which they are borne should be carefully studied, in order that the physician may be informed upon this point. When digestion is well performed, the heat is not sensibly increased, there is no redness of the face, no agitation, and the skin becomes moderately moist. We observe neither yawning, eructations, nor nausea. A minute examination of the stools should be made; besides the information obtained by this sort of digestive analysis in regard to the way in which digestion is performed, it also sometimes enables us to observe the passage of certain undigested articles of food, and to conclude that others should be substituted for them. It is especially at the time of weaning, or during dentition, that this precaution should be taken. It may be said that, without it, it is impossible to direct a child's diet. Third precept: *Observe the effects of articles of food, and preserve the motions to show to the physician.*

The relations of the time of eating with that of taking medicine should be regulated by the physician; yet, in families, too marked and too numerous incompatibilities of this sort are admitted. It may be said that, with the exception of purgatives and emetics, that is to say, medicines which disturb the digestive functions, there is more advantage in giving medicines with the meals than in the interval between them; yet, as before remarked, a distinction is to be made in regard to the resinous purgatives (aloes, rhubarb, and scammony, for example), which operate better when taken together with the food. Understand, indeed, that the medicines, in this case, exert no greater action upon the walls of the stomach, but that, taking advantage of a physiological act, they more easily pass the barriers of absorption. How often have I seen little patients, for whom some light food had been ordered,

have to wait three or four hours for their meal, because they had to take some medicine, for instance quinine, which, of all others, is best given at meal-time! The physician should dispel such illusions.

It is more important to preserve, as much as possible, the regularity of a child's meals, even when taken with an acute disease. If it is only a broth, it is better to give it at the usual hours of eating. The disease, of itself, breaks in sufficiently upon established habits, without our intentionally adding to the disorder.

But, one rule which should be sedulously followed is, to give food as far as possible from the time when an exacerbation is likely to show itself. It is very rarely that a disease shows a uniform severity through the whole day and night; almost always it seems to become aggravated at certain hours, especially in the evening and the forepart of the night. This should be taken into account in the regulation of the diet. I scarcely ever order food to be taken after four o'clock in the afternoon, except, if there be urgent need of sustenance, to allow one or more dishes of broth during the night. Digestion gives rise to a true physiological fever, and it would be wholly improper to aggravate the febrile exacerbation which usually occurs in the evening. This precaution is all the more necessary for children who are laboring under oppression; taking food too late in the evening invariably augments the embarrassment of breathing, and dooms them to a bad night. Fourth precept: *Always to ask the physician in regard to the interval which should elapse between the food and the medicines prescribed; to feed children chiefly at their habitual meal-times, and to give them only liquid food after four or five o'clock in the evening.*

Another rule consists in keeping a careful account of the patient's desires and of the particular susceptibility

of his stomach. Nothing is less scientific than the absolute specification of the articles of food to be given. The physician should designate classes of food, so that the mother may choose, within their limits, the particular article which the child most desires. It has been said, with reason, that a dish desired is half digested, and it is true of all ages. Yet it must be remarked that those mothers who understand the matter direct their children's alimentary tastes into almost any channel they please, or divert their repugnance by artifices known to themselves. They have nothing to learn in this respect.

I must warn them against the abuse of meat broths. Unquestionably these afford, in an agreeable and substantial form, most of the savory and nutritious principles of the meat; they furnish a large amount of nourishment, and without burdening the stomach; but it is desirable that they should be grateful to the patient, and not appear to him in the unpleasant guise of something ordered to be taken. We religiously begin alimentation with broths, in the child as well as in the adult. Vegetable soups, mulled egg, milk, a mixture of milk and broth, etc., would vary this monotonous diet, and would generally please children better. The expression of their face when any article of food is offered them shows clearly whether they desire it, or whether they merely submit to it, and thick broths will seldom stand this test after a few days. The abuse of meats and their juices is very common in the diet of sickness and convalescence; I shall revert to it presently. Fifth precept: *Note the likes and dislikes of patients in the matter of food, and do not insist upon dishes which disgust them.*

The exquisite sensibility of health is increased during disease; hence the patient needs food of the very choicest sort, fresh and unadulterated. A healthy stomach may,

without much detriment, run the risks of difficult digestion, which in certain cases of disease would become truly dangerous. Therefore, in the family, precaution should be doubled in this particular, and no sacrifice should be avoided when the stake is so heavy. An indigestion may be fatal, and it may be owing to too rich a broth, a stale egg, an inferior quality of chocolate, or a too acid wine. Sixth precept: *To give only food of the very best quality, and prepared with fastidious care.*

It will be useful, here, to enter into some considerations in regard to the commonest of these aliments, those which constitute the basis of the diet in acute diseases, viz.: milk, farinaceous, meat and gelatinous broths, eggs, and chocolate.

Hufeland, as we have seen, has declared against the too sparing use of milk for children after weaning; the nature of the liquid, its easy digestibility in general, the habit which children have for it, and the joy with which they accept it, are so many excellent reasons for restoring to it its due part in their diet. It is to be regretted also that milk is not more used in the nourishment of sick children. Indeed, they are very commonly, and unaccountably, subjected to the diet of adults, while milk, which should then constitute their chief food, is in some sort interdicted.

Some objections are alleged against it, and they are time-honored. It is accused of being unsuited for *bilious* children and for those with fever. These indictments were framed by Hippocrates himself, and the echo comes down to us; but they are certainly less justifiable than the advice, given by the father of medicine, to forbid milk to patients with defective digestion. Is the milk digested? That is the whole question. If it is digested, it does good. What child's stomach is there, then, which

will not digest milk when it is of good quality, freshly drawn, given at suitable times and in proper quantity? But, like all fatty food, milk is well digested only when accompanied by condiments. Sugar is the best and most natural of all, and it is also the one which best pleases a child's taste; but the same result may be attained by adding to it small quantities of salt, or an aromatic infusion of anise or angelica.

It should, however, not be forgotten that milk is differently borne, according to its source. Cow's milk is most commonly employed; goat's milk contains less butter and sugar, and it has a peculiar odor, the inconvenience of which, for that matter, is soon blunted by habit. I have always been struck with the abuse made of ass' milk in the treatment of adults, and the neglect of so precious an aliment in the case of children. It is, *par excellence*, the proper milk for them, when necessity condemns them to premature weaning; it is also the milk best suited for children when it becomes necessary to give them light nourishment in acute diseases; but it is, of all others, I repeat, that which is least thought of for them.

One very important remark must be made here—that cow's milk is quite a different sort of food, accordingly as it is taken cold or hot. In the first instance, it may be prejudicial or advantageous, according to the circumstances of the case, from its tendency to increase the urinary secretion and to give rise to diarrhœa, which double effect is not produced by boiled milk, especially when not diluted with water.

The *soups made without meat* are either the vegetable soups (of which the classic herb soup is the type), or soups made of the muscular flesh of certain fish or mollusks. Fish soup is capable of efficient service in the treatment of children among the poor, especially at the

seaside, where several kinds of fish proper for this purpose may be had cheap; it is the poor man's veal soup; and it is astonishing that its employment is so limited. In certain countries frog soup is used. It possesses the slightly savory and nutritious qualities of all soups made from white meat.

Hygiene cannot pretend to teach culinary theories to the mother; but yet there are details in the preparation of a sick person's soup which are not so generally known as to make it out of place to refer to them here. I cannot do better than to reproduce here what I have said elsewhere upon this matter of alimentary hygiene, in which families and physicians are not always so well versed as they should be.

The best soup is the *economic soup*, or *home soup*, the only one which should be given to patients, if we wish to spare them the bad effects of the dubious and ill-elaborated soup of the dark formulary of the restaurants, in which the heterogeneous relics of roast meats and suspicious sauces combine in a dangerous chemistry, fatal to the stomach of the convalescent. Well-made *hospital soup* is generally very good, sometimes even superior to domestic soup, by reason of the relatively large quantities of material employed, and the technical skill with which its preparation is conducted. It is the staple article in those establishments, and too much care cannot be bestowed upon it.

It is customary to judge of the quality of a patient's soup by its color, by its tendency to form jelly on cooling, and by its density; but these three tests are insufficient, and even deceptive. The color of the soup depends upon the quantity and nature of the coloring matters which are put into it, and has nothing to do with its strength; its tendency to solidify depends on the amount of gelatine

which it contains ; its density is owing to the same cause, and to the proportion of fatty matter in it. Nevertheless, this latter quality acquires a true value when the soup is made of the same materials. Repeated trials have satisfied me that good beef soup should have a density of at least 1012. In point of fact, however, these methods must yield to the sense of taste, which alone will furnish a precise estimate of the alimentary value of soup, just as it alone enables us to classify different wines according to their quality.

Fish soup is somewhat extensively used in certain seaside communities ; it is simply a weak albuminous decoction. Those fishes which possess a firm and compact flesh, free from oil, are to be preferred in its preparation.

The *egg* plays an important part in the nourishment of sick children, especially during convalescence. I shall refer here only to its employment as a nutritive drink, under the form of *mulled egg*.

This is one of the commonest preparations in domestic medicine, and is constantly used in diseases in which the symptom of *cough* shows a certain degree of persistence. It is simply an emulsion of the yolk of egg in warm water, sweetened and seasoned to the taste. It is prepared, as is well known, by mixing powdered sugar, the yolk of an egg, and a coffeespoonful of orange-flower water, adding boiling water gradually while stirring the mixture. In England, tea is sometimes used instead of water for this purpose. For children, instead of tea, we may use an aromatic infusion of orange-leaves, anise, balm-gentle, or toast-water. It is estimated that one egg (the white and yolk together) contains as much nourishment as 100 grammes [about three ounces] of good cow's milk. It is well to bear this chemical analogy in mind, without according it absolute accuracy.

Of all the aromatic nutritive drinks, *chocolate* is the one which has given rise to the most discussion as to its hygienic value, some considering it easy of digestion, while others think it heavy and indigestible. These differences of opinion may be explained by the innumerable varieties of chocolate, each one claiming the superiority, and all encumbering the newspapers with their pompous advertisements; by the prevalence of fraud in the production of this sort of food; and finally, by the manner in which it is prepared, which greatly influences its digestibility.

The surest way—almost the only one, I may say—to get chocolate of good quality, is to have it made at your own house by those workers in chocolate who carry on their trade in the south of France; they bring their implements with them to a house and produce irreproachable chocolate at a cost of three and a half or four francs a kilogramme [about seventy-five cents for two pounds]. Of late, the pharmacists have kept good chocolate. It is a happy innovation, and one which furnishes the most solid guaranty.

The so-called *analeptic* chocolates ostentatiously advertised; also chocolate with *ass' milk*, with *Iceland moss*, or with *guarana*, should be avoided. As food, they are no better than ordinary chocolate, and they are much dearer. Salep may be added to good common chocolate, if desired.

As milk and soup are not well digested unless accompanied with condiments, so, also, chocolate needs to be aromatized. The so-called chocolate *of health*, which contains a little canella, and vanilla chocolate, should be preferred. It is necessary to state that chocolate made with milk is difficult of digestion, while chocolate simply boiled in water is in the highest degree easy to digest.

Children, moreover, show a decided taste for this substance. It is always sure to be readily taken by them, and, during the course of acute diseases, it is a truly welcome variation from the somewhat monotonous catalogue of liquid aliments.

Coffee made with milk, while undeserving of the very decided reprobation which has been launched upon it, is not a fit food for children. It may be advantageously replaced by acorn coffee, which has nothing of coffee but the name and the color, and which, diluted with milk, makes a very agreeable and very wholesome food for children, especially during dentition, and at the time of weaning.

Oat-meal gruel, combined with milk in varying proportion, *racahout*, etc., complete the list of liquid aliments used to sustain the strength of little patients during the acute stage of diseases, sufficing for all their dietary wants under such circumstances; but convalescence, and the invalid state, as well as chronic diseases, call for something more, and substantial and concentrated food should be selected. This matter will be considered in the next chapter.

CHAPTER XV.

THE MANAGEMENT OF CONVALESCENCE.

Gentil réveil de la force endormie,
Douce santé ! * * *

CLEM. MAROT.

Qui va piano va sano.

THE child having passed the dangerous period of an acute disease, anxiety is calmed, but the struggle is not yet definitively won, and it would be very risky to fling aside the reins and to fancy that there was nothing more to be done. There are two dangers to be feared : relapses, and the transformation of the disease to a chronic affair. The time is not yet come for either the physician or the mother to cease their efforts ; on the contrary they should redouble their vigilance.

Disease brings grievous apprehensions, but convalescence gives rise to dangerous hopes ; the flush of confidence follows the dark days of dread, and the house, so lately sad and silent, becomes bright and lively ; there is no more stepping on tiptoe; we once more talk aloud; the hearth is thronged with friends and news-seekers; rules are broken, prudence is less vigilant, and the treacherous enemy often reoccupies the position which he had left only as a feint, and which should have been better guarded.

It must be confessed that the sick are better cared for

than the convalescent, both by the physician and the mother—by the physician, because his function is not yet so thoroughly hygienic as it should be, and also, because, being called elsewhere by more urgent danger, he has not the time to devote himself to the complicated task of directing the numerous details of convalescence; by the mother, because she does not sufficiently realize the extreme importance of the care which her child demands at such a period.

Yet, convalescence is her particular sphere of action, where her part preponderates. Not that I would counsel her to settle for herself certain very delicate questions which perplex the most experienced physician; but I should desire that, being well informed upon certain important points, and having her course of action distinctly marked out, she should be able to follow it, and take in hand the administration of those minor measures which she so well knows how to make effective. Nursing is an instinct with women; a little added art would do no harm.

A volume might be written upon the hygiene of convalescence, but I must restrict myself in this place to a few general outlines. These will not have been useless if they demonstrate to the mother that, although convalescence is established, she yet has something more to do.

The period of confinement to bed and to the room, the diet of the convalescent, his amusements, and his return to his ordinary mode of life—such are the questions to be rapidly passed in review.

I.

In nothing, perhaps, is the physician so opposed by vulgar prejudice as in regulating the period of confinement to bed and to the room. Exaggeration is prevalent,

and we have to keep up the fight begun by Hippocrates, who wished "that the timid could be pushed out of bed and the lazy kicked out." It is difficult for us to persuade people that a prolonged confinement in bed is useless, if not harmful, in a great many cases. Undoubtedly, during the febrile period of a disease, when the child's functions should be kept in as complete repose as possible, the bed is necessary (especially with the temperaments already indicated), but it should not be carried too far, and I am very much in favor of getting children up at an early period. The desires which they express upon the subject, and their incessant motion in bed, are trustworthy signs of the propriety of letting them up; moreover, they are allowed to sit up only a short time the first day, and the way in which this is borne is a measure of its fitness. If the child is very young it is well to seat him on cushions, or on a carpet; he will then try his strength, and we can at once conclude whether there is a real need of movement or simply caprice. To keep him immovable in bed entails several disadvantages: the respiration, which is rendered less active by repose, and by the pressure sustained by the chest when the child is lying down, is imperfectly performed, the appetite flags, and an obstinate constipation is established. Popular opinion attributes a weakening influence to the bed; this is true, and is explained by the effects which I have just now alluded to. The bed, then, should not be too steadily used after convalescence has begun.

The too prolonged use of the bed, and confinement to the room, both proceed from the fear of exposure to cold, sometimes well founded, but generally exaggerated. I have already expressed my views upon this point when speaking of the ventilation of a sick child's room. Air is just as necessary, if not more so, for convalescents, and

we have no right to subject them to a positive injury for the purpose of avoiding dangers which are often imaginary.

There is a well-characterized disease—that of the *bed-room*—most commonly met with in hospitals, even the best of them: but our private patients are too often seized with it, and yet it might almost always be prevented. Who has not seen patients, previously vigorous, brought into the hospitals with some acute disease—a pneumonia, for example,—manifest curious complications during their convalescence—a slight, protracted fever, with exacerbations, languor, or impaired digestion? The wounded, too, and those who have been operated upon, whose general health is unaffected, are frequently attacked in a similar manner. We need not seek far for the cause—it is *want of air* [*inanition d'air*]. Open the windows, or carry the patient out of doors, and the eye will become animated, the colour freshened, the appetite improved, and the digestion relieved. We witness a resurrection like that of Thomas Windham, spoken of by Sydenham, who, being attacked with the epidemic cough in 1675, was without any complication, going from bad to worse, but was saved by that renowned practitioner, who, as his sole remedy, prescribed free exposure in the open air, and the diuretic regimen.

I am by no means averse the indiscriminate employment of this powerful measure: it demands a profound knowledge of the patient's actual condition and of that of the atmosphere. But I do maintain that patients, and especially women, are kept too closely housed, and that their recovery is thus retarded. The source of the evil being indicated, the remedy is at once obvious; we must substitute a pure and stimulating out-door air for the heavy, dull and sedative air of the room.

The limit at which we should stop is, confessedly, a delicate matter; it depends upon the nature of the disease, of the climate, and of the season. Catarrhal and rheumatic affections demand particular caution, and, even to a greater degree, the same is true of eruptive fevers. But here also we must discriminate.

Popular medicine has decreed a singularly rigorous quarantine of such cases. Of all the eruptive fevers, *scarlet fever* alone demands it. It is well known that very serious convulsive and dropsical complications rather frequently follow upon this disease when the child has too soon been exposed to the open air, especially in northern latitudes, and during the cold season. The period of forty days, designated for this sequestration, should, under the two conditions I have just now mentioned, be maintained with the utmost rigor. I have seen accidents occur even after this period. But it need not be so prolonged in case of a mild attack, if it be in the warm season and the weather favorable, and if the scaling of the skin has been satisfactory and completed for several days. It has recently been advised to anoint children with oil before allowing them to go out, or rather to smear a bit of lard rapidly over the surface, so as to give it a glistening appearance. This practice is simple, and I should be rather inclined to consider it useful; I always advise it, and, since adopting it, I have, when the season was favorable, allowed children to go out by the twenty-fifth or thirtieth day of scarlet fever, and without the slightest accident occurring. Yet, I dare not say that, in severe cases, and during the winter, it should do away with the rigorous quarantine above indicated.

Measles does not require so prolonged a confinement to the room, and furnishes a guide in the condition of the air passages. The sequelæ of measles, with the exception

of discharges from the ear, and ophthalmia, are seated exclusively in the bronchial tubes and the lungs; so that, when the symptoms of pulmonary catarrh have not been severe, and have disappeared, and when there is no hereditary predisposition to consumption, we may properly allow the child to go out after the twentieth day, provided, of course, the external temperature and the season are favorable.

Urticaria does not call for any sequestration. As soon as the child is rid of the digestive derangement, and the nervous excitement which accompanies this eruption, he may be allowed to go out.

In regard to *small-pox*, the period of sequestration which it necessitates depends upon the condition of the strength and upon the presence or absence of complications. The indications are drawn rather from the general than from the local condition; that is to say, from the pustules, when, of course, they have arrived at general and complete desiccation.

Among the diseases of children there is one which is really aggravated by excessive seclusion. In this respect there are two diametrically opposite mistakes committed —one at each extreme of the social hierarchy: among the rich, *whooping-cough* is too much shut up, while, among the poor, it is allowed too much in the streets. The rich and the poor are both in the wrong. There are two periods to this disease—the one, *catarrhal*, that of the onset; the other purely *nervous*. In the first there is often fever, and, if the child be exposed to the air, he is subjected to the risk of bronchitis or catarrh. In the second there is pallor, and often bleeding from the nose. If the child be immured, the appetite is enfeebled, the blood becomes still more impoverished, and the disease is indefinitely prolonged. I have already stated that the simplest whoop-

ing-cough is a serious matter, demanding the care of the physician.

For the rest, and I always revert to this, it is more difficult to fix *scientifically*, that is to say, *usefully*, the day when a convalescent may go out than it was to appropriately order an emetic or leeches for him when he was sick. Hence it should not be done without authoritative counsel. Let it not be imagined, indeed, that *excessive caution* is harmless. Timorous and apathetic people shield themselves behind it, which is detestable. The physician's usefulness lies exactly in shortening, as much as possible, the quarantine to which children are subjected.

Finally, I will enumerate the various expedients to be employed to render the transition from the alcove to the street harmless. These are : changing from one room to another, alternately aired ; opening one window after another; taking the child out in a carriage for the first time ; gradually diminishing the clothing as the child becomes accustomed to the open air; suiting the excursions to the direction of the wind and to the means of shelter; a progressive increase in their duration, etc. How important is all this, and how badly is it generally practised!

II.

I have already outlined the diet proper for children in a state of disease. I have now to point out that which is most suitable for them during convalescence. We have now nothing more to do with liquid food, calculated as much to divert the patient as to sustain him, but with nourishment differing from his ordinary diet only by its great simplicity and by the small quantities in which it is allowed.

The cooking for convalescent children is not the same as for those in health ; it has nothing in common with that complexity and that profusion of viands which are seen at our tables, and which excite the palate after the stomach has been satisfied, and impose upon the latter a problem in analysis which, good chemist as it is, it finds difficulty in solving. This organ is wearied with troubles originating in itself, or reflected upon it ; it has, to a certain extent, unlearned its functions ; these need to be taught it again gradually and carefully, giving it only food extremely simple in kind and in preparation. A soup and a single article of solid food should constitute a meal. Raw food, sauces, ragouts, and pastry, should be carefully excluded.

I could not now enumerate all the dishes to be interdicted ; it will be shorter to point out those which should be employed by preference.

And, first of all, I will mention *bread*, which, when well cooked and reasonably stale, pleases children, affords them a useful masticatory exercise, and fitly breaks the monotony of the saccharine diet which is so much abused and which Savoy biscuits often carry beyond reasonable limits.

Eggs, fish, meat, a few herbaceous or farinaceous vegetables, and cooked fruits, are the classes from which the first food should be sought ; but they differ in value according to the mode of their preparation, and the practical character of this book cannot rest satisfied with such vague directions.

Eggs afford a pleasant transition from the broth diet to that of solid food ; but they show no mediocrity. Either they are excellent and easily digested, or else they are bad, and provoke indigestion. They should, therefore, be obtained only from a known and tried source. House-

wifery has approved of certain measures which retard the decomposition of eggs, but hygiene is more exacting, and admits only fresh-laid eggs as fit for convalescent children.

The practical tests of the freshness of eggs are of special importance in this connection, but I cannot enter into these details.

Hen's eggs, kept two minutes in boiling water, and two minutes more in the same water somewhat below the boiling point, make an excellent food, easy of digestion. The milky appearance of the white is at once an index of freshness and a proof of good cooking ; it is also the promise of good digestion. It is the stumbling-block of cooks. There is a common proceeding, not therefore to be despised, which invariably makes eggs milky : as many tumblers, filled with water, as there are eggs to be cooked, are to have their contents brought to the boiling point; after withdrawing the glasses the eggs are to be immersed in them, and left there until they can be removed from the water without scalding the fingers. This method is simpler and surer than that of the hour-glass. It is infallible. To cause an egg to be well digested is no mean undertaking, and hygiene does not stoop in descending to such minutiæ. We are thereby reminded of Franklin's saying: "For want of a nail the horse loses a shoe; for want of a shoe the cavalier loses his horse; for want of a horse the cavalier himself is lost." How manifest, in medicine, is this growth of great results from slight causes!

In regard to eggs I must mention a very common piece of routine—that which forbids their employment in the diet of children during the acute stage of diseases. An egg is less nourishing than a broth, and is not more difficult of digestion; we may, therefore, advantageously

vary the broth diet with eggs boiled to milkiness. This I never omit to do; the child, seduced by the appearance of this dish, accepts it with pleasure, because it seems like a meal, whereas, in his eyes, a broth always has a suspicious look of the ptisan.

A boiled egg is the simplest and best of aliments. All other methods of cooking harden the white more or less, and consequently render it more difficult of digestion.

Fish is an excellent article of food for convalescents; by reason of its great diversity of appearance and taste, and of the numerous styles in which it may be cooked, it offers a very available means of varying the diet. The English have, as it were, sealed the utility of fish as food for convalescents by maintaining it, under the name of *fish diet*, as one of the regular hospital diets. But not all fish are equally valuable as regards flavor and the softness and digestibility which we may reasonably require in food of this nature. It is generally best to choose rock fish and flat fish, such as the sole, the turbot, the burt, the dab, the whiting, etc. It is scarcely necessary to state that fish is unfit for convalescents unless it is perfectly fresh.

Closely allied to fish is that favorite mollusk, the *oyster*, which is capable of serving a very useful purpose in the diet of sick persons. It is easy of digestion, and stimulates a sluggish stomach by presenting to it, under the most favorable form, a large amount of sea salt, without which both appetite and nutrition languish. I am in the habit of recommending the use of oysters for feeble and lymphatic children whose flesh is flabby, and of making them drink freely of the salt juice which they contain, and I think that my experience warrants me in imputing thereto a favorable action upon the various lymphatic manifestations.

We now come to *meats*—the white meat of chicken and veal, and the dark meat of beef and mutton. The simplest cooking suits them best—broiling or roasting. Sauces, ragouts, and fries are difficult of digestion, and should be confined to healthy stomachs. The same is true of game ; they are not proper food for the sick. We should remember the German proverb : "Refinements in cooking lead to the drug-shop." If they lead to it they also lead back to it, as daily experience proves. *Sweet-breads* enjoy a just reputation for lightness, but I question their nutritive value. In regard to *brains*, they are somewhat difficult of digestion, whatever may be the general opinion, and they afford no compensatory advantage.

Softness of texture, delicacy of flavor, freedom from stringiness and fat, slight cooking for dark meats, and thorough cooking for white meats, are the conditions which make these articles of food useful.

Certain vegetables complete this list — the potato among the feculent vegetables; boiled endive and spinach, and especially asparagus, among the green herbaceous vegetables, affording a proper variety in the dietary of children.

Among the cooked fruits, stewed apples or pears, and prunes, are the most commonly used, and, as experience shows, the most proper.

In this enumeration we have a diversified scale which we may run through, and which suffices for all the needs as well as all the fancies of children.

Raw food, ragouts, pork, and all sorts of pastry, are wholly unfit for them. Dry English biscuits, without sweetening, alone stand the tests of hygiene; all else should be forbidden as being suspicious.

As for wines, claret and Burgundy, or some old and sound home-made wine, are the only ones which should

be made use of. The sweet wines, particularly Malaga, are of doubtful utility.

I will close with a proverb which embodies a triple hygienic fact bearing upon the dietary of sick children: "Eggs an hour old, bread a day old, wine a year old."

But it is not enough to select appropriate food for children; we must stimulate the appetite when it is lacking, and give the stomach strength to profit by it—by using *appetizers* and *digestives*.

Appetizers are of two sorts: the medicinal and the hygienic. The former include the innumerable category of bitters. Unfortunately the bitter taste is repugnant to children, and it is scarcely practicable to make them take weak infusions of hops, centaury, or chamomile. The addition of syrup of cinchona, or of orange-peel, to his wine, is almost the only way to make an intractable child take bitters. But the physician may avoid this difficulty by ordering the more active bitters so disguised as to deceive them.

As for the hygienic appetizers, I know only three: the sight of food, exercise, and change of air. We see sick children resist the most urgent solicitations and a lengthy enumeration of dishes, and yet their repugnance gives way at sight of some food which they are fond of. Exercise is the appetizer *par excellence*, and, if the child cannot walk, we may, by the passive exercise of carrying him in the arms, or wheeling him about in his little carriage, promote his appetite. If this is not enough, we may still resort to change of air. If we go but a league from the spot where the appetite has been lost, there is a great prospect of regaining it. Country air, so favorable for convalescents, often, as if by magic, rekindles a faltering appetite. This is also, and to a still greater degree, true of the sea-shore. But this is a decided measure, and,

therefore, capable of doing a great deal of good or a great deal of harm, and should be subject to the prescription of a physician, who can properly estimate its advantages and disadvantages.

In like manner, there are *medicinal* and *hygienic* digestives. Among the former I will instance the employment, immediately after a meal, of a warm infusion of anise, angelica, or mint, a teaspoonful of anisette, curaçoa, or elixir of Garus, in a cup of warm water, if sanctioned by the physician. As for the hygienic digestives, they also are moderate exercise and the open air, provided the little patient is not confined to the room.

But, while we often have to stimulate a child's appetite, we still more frequently have to guard against the promptings of a factitious appetite, expressive of a desire rather than a want. By yielding to them we incur the risk of an indigestion which may occasionally prove fatal, or at least we produce a surfeit, of which the legitimate consequence will be impairment of the appetite, to say nothing of the demands which these imprudent concessions will raise. It is in the feeding of children during convalescence that we reap the fruits of the moral discipline under which they have been trained. If they have been subjected to a mild, but firm rule over their will, they will submit to a refusal; but if they have been taught the omnipotence of their temper, they will urge their demands imperiously. If we do not yield to them, they become irritated; if we do yield to them we do them harm—a perilous dilemma, either horn of which involves serious trouble.

I will close with three of Hippocrates' aphorisms (some of which mothers would do well to remember), which shed a practical light upon this question of the diet of convalescence:

"If a convalescent remains weak, although he eats, it is a sign that he is taking too much food; if he continues weak, and does not eat, it shows that he needs an evacuant.

"When a convalescent eats well without gaining flesh, it is unfavorable. (Advice to maternal vigilance.)

"The restoration of flesh slowly lost should be slow, that of flesh rapidly lost, rapid.

"When there is diminished activity the food should be diminished."

How wonderfully truthful and admirably expressed is all this! It is the true simplicity of genius.

III.

During convalescence, physical exercise should be gradually resumed, avoiding undue haste. Exercise, in moderation and proportioned to the strength, increases it by stimulating its repair; immoderate exercise, on the other hand, exhausts it. The former conduces to sleep, while the latter produces wakefulness and an unpleasant state of nervous erethism. There is, if I may be allowed the expression, an *indigestion* of motion as well as an indigestion of food—each having its own dangers.

The heart is particularly excitable in children who have passed through a long course of sickness; it beats more forcibly and more rapidly. Fatigue, at such a time, may transform transitory disorders into permanent troubles. Many a case of organic disease of the heart has thus originated. We should take especial care to avoid this risk whenever (as is almost always the case) convalescence occurs at an epoch of rapid growth. I have already stated that, at such times, we should be particularly careful in regard to the heart.

The passive exercise of the carriage, leisurely walking,

and certain games in which moderate activity is combined with pleasure, readily admit of graduating exercise, which cannot be too moderate. If the child becomes pale and covered with perspiration, if his eyes become circled with black, if there is a disposition to sleep after the exercise, the limit has been exceeded and we must retrace our steps.

Convalescence is a sort of re-creation : the functions are trying their strength, the organs have an unaccustomed tenderness, ordinary exertion fatigues or exhausts them. We must treat it with infinite caution, allowing nothing to agitate the senses, and especially the intellect, the forced action of which should be suspended for a time.

Convalescent children should not be too much urged to play, but should be left to their own inclination, with their accustomed toys, without plying them with new ones which may excite them. Each parent and every friend lays an Esculapian cock upon the little bed which has been the scene of a drama happily terminated : dolls, jumping-jacks, surprise-boxes, sonorous instruments, all accumulate, and the poor little brain yields under so many impressions.

Then come questions without number ; we must needs make him talk, revive his mental development, hitherto clouded, enjoy his repartees, go into ecstasies at his every word, and once more take possession of the dear one who is still with us, and whom we are resolved to guard carefully, but who yesterday seemed as if he were about to die. All this is touching, and even we physicians, sinking for an instant our proper part in that of the father, sometimes suffer ourselves to take part in this sweet and noble emotion. Sympathy invites to it, but reason dissuades. Rest and more rest is the necessary hygienic formula in convalescence. There should be no ill-timed

display of feeling, nothing to excite the child's emotions; but we should allow of the undisturbed formation of that great *scar* of convalescence, to use Bordeu's expressive figure.

Convalescence being well advanced, it is desirable that it should be finished in the country. It is not easily accomplished in a city, and nothing short of absolute necessity warrants the trial.

Finally, we have to meet the serious question of the resumption of work. I shall say but a word upon this point: *mental diet* should follow the same rules with *alimentary diet.* The fatigued brain, which has, some weeks or months since, unlearned its duties, should be suffered to rest for a long time. The return of the general health does not indicate that the mind has recovered its strength; it often happens that the memory has sustained a breach which it will take many months to repair; it resists, and the achievement of the most inconsiderable result demands hazardous efforts.

Prolonged rest is especially necessary after typhoid fever. Every physician can call to mind the remembrance of the sad consequences of a too hasty resumption of study. The mother, therefore, cannot too closely guard against it. A diminished proficiency in a few matters, with safety, will certainly repay all her trouble.

THE END

GLOSSARY.

Analeptic, restorative.
Assimilation, the process by which food is made to become part of the organism.
Auscultation, an examination by means of the ear.
Axilla, the arm-pit.
Axillary, situated in the axilla, or arm-pit.
Aya-pana, a Brazilian aromatic and stimulant plant.
Bleb, a blister.
Cerebral, relating to the brain.
Choleriform, resembling cholera.
Cicatrize, to heal.
Clyster, an injection.
Codex (*medicamentarius*), the French official list of medicines.
Dartrous, of the nature of *dartre* (tetter).
Dentition, teething.
Diachylon, sticking-plaster.
Diagnosis, the art of distinguishing one disease from another.
Dynamometer, an apparatus for measuring strength.
Eczematous, of the nature of eczema (wet tetter).
Enteric, relating to the bowels.
Epidermis, the cuticle.
Epispastic, an application capable of blistering, or of keeping a blister open.
Erethism, excitement.
Expectorate, to bring up matter from the chest.
Febrifuge, a medicine against fever—particularly quinine.
Febrile, relating to fever.
Flux, a flow.
Forearm, that portion of the upper limb which is included between the elbow and the wrist.
Guarana, a paste prepared from the South American plant, *Paullinia sorbilis*.
Herpetic, of the nature of herpes (a skin disease exemplified in ordinary "fever blisters.")
Humoral, relating to the humors, or juices, of the body.
Lachrymation, a flow of tears.
Lactation, the function of giving suck.
Lesion, an alteration of structure, produced by disease or injury.
Lycopodium, a light, yellow powder derived from a cryptogamous plant.
Marasmus, wasting, particularly from tubercular disease of the abdominal glands.
Olfactory, relating to the sense of smell.
Ophthalmia, inflammation of the eye.
Ophthalmic, relating to the eye, or to inflammation of the eye.

Pathology, the science of disease.
Percussion, an examination of the resonance of a part.
Prognosis, an opinion in regard to the termination of a disease.
Ptisan, a nutritive or medicinal drink.
Puerperal, connected with the lying-in condition.
Pus, "matter."
Rucahout, an Oriental article of food.
Secretory, relating to a secretion.
Semen contra, wormseed.
Sequela (æ), a morbid condition caused by preceding disease.
Sinapism, a mustard-plaster.
Stethoscope, an instrument to aid in the perception of sounds within the body.
Suppuration, the formation of pus, or "matter."
Suture, a stitch.
Urticaria, nettle-rash.
Varicella, chicken-pox.
Variolous, pertaining to small-pox.
Vesication, the formation of a blister.

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